DOCUMENT RESUME

ED 079 418 TM 003 022

AUTHOR	French, John W.
TITLE	The Description of Personality Measurements in Terms of Rotated Factors.
INSTITUTION	Educational Testing Service, Princeton, N.J.
PUB DATE	Mar 53
NOTE	274p.
EDRS PRICE	MF-$0.65 HC-$9.87
DESCRIPTORS	*Factor Analysis; Factor Structure; *Interest Research; Interest Tests; *Personality Assessment; Personality Tests; Rating Scales; *Research Reviews (Publications); Statistical Analysis

ABSTRACT

This review of factor analyses in research concerned with personality and interest measurement is presented in two main sections. Part I contains the reviews of the analyses, for each of which the following information is provided: (1) the full reference to the article describing the analysis and to the source of the data used if the data were borrowed; (2) the number and description of subjects; (3) a note on any peculiarities or unusual techniques used in the analysis; (4) a description of each of the variables; (5) factor names; (6) the table of factor loadings; (7) intercorrelations of the factors. A supplementary list of analyses omitted from this volume is given at the end of Part I. The factors identified in at least two analyses with sufficient certainty to receive a name are described in Part II. A list of analyses in which the factor appears, its description, and a list of the variables that are the best measures of the factor are given for each. A supplementary list of factors is also provided. Indexes of variables, names and factors conclude the volume. (KM)

THE DESCRIPTION OF PERSONALITY MEASUREMENTS IN TERMS OF ROTATED FACTORS

By

John W. French

Educational Testing Service

March 1953

FILMED FROM BEST AVAILABLE COPY

ED 079418

THE DESCRIPTION OF PERSONALITY MEASUREMENTS
IN TERMS OF ROTATED FACTORS

By

John W. French

Educational Testing Service

March 1953

TM 003 022

ACKNOWLEDGMENTS

The writer wishes to acknowledge the helpful advice on the interpretation of the literature and factors given him by David R. Saunders and Henry N. Ricciuti. Special acknowledgment is also due Sara E. Matlack, Marilyn Laird and Mary Evelyn Runyon for their painstaking job in typing and setting up the copy for reproduction.

TABLE OF CONTENTS

Introduction

Page

The Selection of Analyses 6
Uses of the Survey 8
Media of Personality Measurement 9
Comparison of Personality with Aptitude-Achievement Domains . . . 9
Cross-Identification 10
Composite Factors 13

Part I, Analyses

Explanation of the materials contained in Part I 15
Ab -- Abrams, E. N. Normal and Neurotic Veterans, 1949 17
BaA -- Baehr, M. E. Temperament: Thurstone-Guilford Factors, 1952 19
BaB -- Baehr, M. E. Temperament, 1952 20
BC -- Barnes, C. A. Psychosexual Development, 1952 22
Be -- Bennett, E. Discriminating Neurotic from Normal, 1945 . . . 25
Bo -- Bolanovich, D. J. Industrial Rating Chart, 1946 28
BrA -- Brogden, H. E. Forty Character Tests, 1940 30
BrB -- Brogden, H. E. Correlations of Sister McDonough, 1944 . . 34
BT -- Brogden, H. E., and Thomas, W. F. Sociability, 1943 . . . 36
CaA -- Cattell, R. B. Description of Personality, 1945 39
CaB -- Cattell, R. B. Confirmation and Clarification, 1947 . . . 46
CaC -- Cattell, R. B. Primary Factors in Women, 1947 51
CaD -- Cattell, R. B. Primary Factors in Objective Tests, 1948 . 53
CaE -- Cattell, R. B. Main Factors in Questionnaires, 1950 . . . 63
CaF -- Cattell, R. B. Ergic Structure, 1950 77
CaG -- Cattell, R. B. Personality Source Traits, 1951 82
CD -- Crissy, W. J. E., and Daniel, W. J. Vocational Interest Factors in Women, 1939 94
CE -- Cattell, R. B. Reinterpretation of Eysenck's Factors, 1945 95
Ch -- Carlson, H. B. Attitudes of Undergraduates, 1934 97
CM -- Cattell, R. B., and Miller, A. Confirmation of Ergic Patterns, 1952 98
Co -- Cottle, W. C. Multiphasic, Strong, Kuder, Bell, 1950 . . . 101
CP -- Carter, H. D., Pyles, M. K., and Bretnall, E. P. Vocational Interest Scores in High School Boys, 1935 106
CSA -- Cattell, R. B., and Saunders, D. R. Matching Factors from Rating, Questionnaire and Test Data, 1950 107
CT -- Cattell, R. B., and Tiner, L. G. Structural Rigidity, 1949 114
CW -- Cook, E. B., and Wherry, R. J. MMPI and Aptitude Tests, 1950 118
DT -- Denton, J. C., and Taylor, C. W. Mental Abilities and Personality, 1953 120
Du -- Duffy, E. Attitudes (Allport-Vernon), 1940 122
Ey -- Eysenck, H. J. 700 Neurotics, 1944 123
Fe -- Ferguson, L. W. Primary Social Attitudes, 1939 127
FH -- Ferguson, L. W., Humphreys, L. G., and Strong, F. W. Interests and Values, 1941 128
FK -- Freeman, G. L., and Katzoff, E. T. Psysiological Reactions and Emotionality, 1942 129
Fn -- Flanagan, J. C. Bernreuter Inventory, 1935 133
FT -- Ford, C. F., and Tyler, L. E. Terman-Miles M-F Test, 1952 135

TABLE OF CONTENTS

Part I, Analyses (continued)

Page

Gi -- Gibb, C. A. Personality Traits, 1942 138
GuA -- Guilford, J. P., and Guilford, R. B. Factors S,E,M, 1936 140
GuB -- Guilford, J. P., and Guilford, R. B. Factors D,R,T,A, 1939 143
GuC -- Guilford, J. P., and Guilford, R. B. Factors N,GD, 1939 . . 147
HJ -- Hart, H. H., Jenkins, R. L., Axelrod, S., and Sperling, P. I. Traits of Delinquent Boys, 1943 150
Ho -- Howie, D. Personality in the Classroom, 1945 152
Ko -- Koch, H. L. Pre-School Children, 1935, 1942 154
Kr -- Kremer, A. H. Persistence, 1942 158
La -- Layman, E. M. Adjustment Questionnaire, 1940 161
Lo -- Lovell, C. 13 Personality Variables (Guilford's) 1945 . . . 167
Lu -- Lurie, W. A. Spranger's Value-Types, 1937 170
LW -- Lorr, M., Wittman, P., and Schanberger, W. Elgin Prognostic Scale, 1951 172
MD -- McNamara, W. J., and Darley, J. G. Test-Retest Performance on Attitude and Adjustment Tests, 1938 173
ML -- Marzoff, S. S., and Larsen, H. H. Symptoms with a Problem Check List, 1945 174
Mo -- Mosier, C. I. Neurotic Tendencies, 1937 175
No -- North, R. D. Introversion-Extroversion, 1949 178
Ri -- Richards, T. W. Nursery School Children, 1940 179
RTA -- Reyburn, H. A., and Taylor, J. G. Webb's Data, 1939 180
RTB -- Reyburn, H. A., and Taylor, J. G. Introversion-Extroversion, 1941 182
RTC -- Reyburn, H. A., and Taylor, J. G. Rerotation of Guilford's D,R,T,A Data, 1943 183
RTD -- Reyburn, H. A., and Taylor, J. G. Rerotation of Guilford's N,GD Data, 1943 184
SaB -- Saunders, D. R. Relation Between Questionnaire and Rating Factors, unpublished 185
SB -- Stewart, N., and Bergmann, C. Cognitive and Conative Factors in Ratings, 1951 191
Sg -- Strong, E. K. Vocational Interests, 1943 193
St -- Stott, L. H. Self-Reliance, 1938 195
ThA -- Thurstone, L. L. Vocational Interests, 1931 200
ThB -- Thurstone, L. L. Guilford's 13 Scores, 1947, 1951 201
To -- Torr, D. V. Interest Inventories, 1952 203
Ts -- Tschechtelin, S.M.A. Children's Rating Scale, 1944 207
Ty -- Tyler, F. T. Fifteen MMPI Scales, 1951 208
WB -- Wittenborn, J. R., Bell, E. G., and Lesser, G. S. Old Patients with Organic Pathology, 1951 209
WH -- Wittenborn, J. R., and Holzberg, J. D. Young Patients with No Organic Pathology, 1951 210
Wi -- Wittenborn, J. R. Male Patients of All Types, 1951 212
WL -- Wheeler, W. M., Little, K. B., and Lehner, G. F. J. Structure of MMPI, 1951 214
WM -- Wittenborn, J. R., Mandler, G., and Waterhouse, I. K. Young Patients with No Organic Pathology, 1951 215
Supplementary Analysis List 216

TABLE OF CONTENTS

Part II, Factors . . . . . Page
Explanation of materials contained in Part II 221
A -- Agreeableness 222
Al -- Alertness 223
Au -- Autistic Tendency 223
Ax -- Anxiety 224
Cd -- Cycloid Tendency 224
Cu -- Culture 225
Cv -- Conventionality 225
De -- Dependability 226
Do -- Dominance 227
Dt -- Deterioration 228
E -- Emotionality 228
Ei -- Emotional Immaturity 230
Ex -- Excitement 230
Fe -- Fearfulness 231
G -- Intelligence 231
Gs -- Gregariousness 232
Ho -- Honesty 233
Hy -- Hysteria 234
Ia -- Interest in Athletics 234
Ib -- Interest in Business 235
Ic -- Interest in Clerical Work 236
Ie -- Interest in Aesthetics 236
If -- Interest in Family 237
Il -- Interest in Linguistic Activities 238
Ip -- Interest in Philosophizing 239
Ir -- Interest in Religion 239
Is -- Interest in Science 240
Iw -- Interest in Social Welfare 242
Ix -- Interest in Sex 243
Iz -- Interest in Puzzles 243
Lo -- Loneliness 244
Ma -- Mania 245
Me -- Meticulousness 246
Mf -- Masculinity 246
Mp -- Impulsiveness 247
Ne -- Nervousness 248
Pc -- Psychotic Tendency 248
Pe -- Persistence 249
Ps -- Paranoid Schizophrenia 251
Re -- Religious Attitude 251
Rh -- Rhathymia 252
Sc -- Self-Confidence 252
Se -- Sensitive Attitude 253
Sf -- Sophistication 254
Sn -- Self-Consciousness 255
So -- Sociability 256
Ss -- Self-Sufficiency 256
Su -- Surgency 257
Wi -- Will Control 258
Supplementary Factor List 260

Index I, Index of Variables 261
Index II, Index of Names 281
Index III, Index of Factors 283

INTRODUCTION

Research in the psychology of personality has been tremendously fluent in recent years. Although only a small fraction of this has been quantitative in nature and only a small fraction of this in turn has used the method of factor analysis, nevertheless there are by now so many unrelated factor studies of personality that it is difficult to find which areas are explored and which are not. Since each factor analysis can only explore a relatively small aspect of the mind, and since agreement between analyses is far from perfect, it is necessary to bring many of them together in order to arrive at a comprehensive picture. This survey brings together comparable factor analyses in the field of personality and sets forth their findings in such a way as to be as meaningful as possible to the reader. This volume is parallel in all essential respects to the writer's earlier publication, The Description of Aptitude and Achievement Tests in Terms of Rotated Factors, Psychometric Monograph, No. 5, 1951.

The most exacting part of the task of combining analyses into an integrated whole was studying the interpretations of the factors and cross-identifying factors found in one analysis with those found in other analyses. The interpretations given to factors by the authors of the analyses were found in the majority of cases to stand up well when comparisons were made between analyses. These interpretations were of the utmost assistance to the writer in bringing together and making sense out of approximately 450 factors under consideration. When careful comparisons between analyses and the loadings of tests were made, it was necessary to alter or question some interpretations which had been made by the authors. Most of the alterations of interpretations were slight; a few, however, gave entirely different meanings to the factors. The considerable reliance on subjectivity in making the cross-identifications is discussed in a later section.

For all meaningful factors names were chosen which fitted their interpretation as closely as possible. For the sake of consistency all names chosen for factors are nouns or noun forms. Some authors have intentionally avoided the naming of factors, feeling, with considerable justification, that a name implies a cross-identification or an interpretation with more certainty than is warranted by the data. In such cases numbers or alphabetical code letters were attached to the factors and descriptive interpretations rather than names were offered. For purposes of a survey of this sort, however, names are used advisedly for the specific purpose of suggesting cross-identifications even where these identifications are not established beyond doubt.

The Selection of Analyses.

Because of the difficulty of making cross-identifications among analyses using diverse statistical methods, and because of the large number of factor analyses in the literature, it was found necessary to limit the factor analyses included in this survey in the following three ways:

1. Limitation to analyses concerned with personality and interest measurement. The factor studies in the literature seem to be divided into two general domains: that of aptitude and achievement tests on the one hand, and that of personality or interest ratings, questionnaires, and scales on the other hand. In each domain there has emerged a different set of factors.

The few analyses combining variables from both domains indicate the nature of the separation. Analyses pertinent here are Analyses BrA, CaG, CSA, CT, CW, Gi, and Ho in this book and Re and TG in Psychometric Monograph, No. 5. A few findings are of interest; for example, logical reasoning and poor reading preferences have a loading on Masculinity (CaG-11, 16), mechanical tests go with Surgency and Masculinity (CW-15,16), and verbal measures have a loading on Self-Sufficiency (Gi-5,7). However, such examples are infrequent.

For purposes of brevity, analyses limited to variables in the following categories are mentioned only briefly in the Supplementary Analysis List at the end of Part I: (1) attitudes toward a specific vocation such as teaching, (2) types of humor, (3) types of annoyance, (4) physiological effects, (5) anthropological measurements (6) Rorschach responses. Some factors in these areas have been shown to be related to personality traits, but in no case yet has the method of factor analysis been given the opportunity to show such a relation because analysts tend to limit themselves to one kind of data in each analysis. Admittedly a narrow definition of personality is being taken by omitting the categories listed above, but findings in those areas do not, at this stage, aid in the interpretation of the personality factors derived from the more direct (though very fallible) types of measurement.

2. Limitation to analyses in which reference factors have been extracted and where there has been rotation toward a simple structure. The great majority of recently published factor analyses fall within this limitation. To preserve the feasibility of combining results by the cross-identification of factors, it was found necessary to avoid the over-complication resulting from the inclusion of analyses using diverse statistical methods. Although the results of the different methods are by no means always unrecognizably different, the extraction of a general factor, for example, produces an effect on the size of factor loadings which considerably hampers comparison with analyses in which no general factor has been extracted.

Likewise use of the centroid method without rotation of axes produces arbitrary factors which can only rarely be cross-identified with those in rotated analyses or other unrotated analyses. In some cases where rotation has been attempted there is still a factor pattern so devoid of structure as to be unuseful in this sort of survey. Such studies are made reference to in the Supplementary Analysis List. Most of the analyses included in this survey use orthogonal rotation of axes, while the rest use oblique rotation. There is some difference of opinion on the respective advantages of the two methods. Orthogonal rotation has the theoretical advantage of simplicity, where each factor may be considered independently of all others. The assumption of orthogonality implies that the simplest structure would be obtained by orthogonal rotation were it not for error variance or special selection of subjects. Oblique rotation, however, has been more popular recently, since it seems likely that psychological variables would only rarely develop independently. Since simple structure is usually best obtained by oblique rotation, the assumption of orthogonality has seemed to be an arbitrary distortion of the facts. The reader will be able to find among the orthogonal analyses described here a number of places where an oblique rotation would clarify the loadings on a factor. This was illustrated in Psychometric Monograph No. 5, but such an illustration will be omitted here for the sake of brevity. However, the differences in the results of orthogonal and oblique rotation are usually sufficiently small that their parallel treatment in a survey of this kind causes no special confusion.

3. Limitation to R-Technique. In Q-technique the factors are defined by clusters of subjects who have similar personality make-up, i.e., who have a similar pattern of endowment in the personality traits measured in the analysis. If rotation to simple structure is possible at all, the factors finally resolved will represent, not personality factors, but certain frequent patterns of factorial endowment. Therefore, these cannot be compared directly with the factors under survey here.

In P-technique the factors are defined by clusters of measurements on a single individual that vary concurrently over a period of time. Most measureable characteristics vary both within and across individuals. These can be studied by both P- and R-technique, and analysis by P-technique has revealed many of the factors found by R-technique. However, fluctuating variables such as those related to hunger would be very proper subjects of P-technique, while food intake of all subjects would have to be very carefully controlled if the individual differences in hunger were to be studied by R-technique. On the other hand characteristics such as intelligence and anthropological measurements are relatively permanent attributes of the organism, and so can be studied most easily by R-technique where use is made of individual differences. It is true that long-term P-technique investigations of such things as hunger and physical size might be successful and very revealing. However, since the number of P-technique studies is still small, the nature of the comparison between the P and R factors is still in doubt. Therefore, it seemed safer as well as a necessary space saver to omit these studies.

Uses of the Survey.

This book has been set up mainly as a reference source on factorial studies rather than as a theoretical exposition or criticism of the conclusions which have been reached through the method of factor analysis. Critical evaluations of the analyses are kept to a minimum, although the dictates of space made it necessary to omit some that were not considered helpful in the understanding of personality factors. Omissions for circumstantial or evaluative reasons are explained above and in the Supplementary Analysis List.

As a reference source this summary is set up so that information can readily be obtained on the following points:

1. Factor analysis studies. In Part I, Analyses, the section devoted to each of the analyses includes the reference to the article describing the analysis, variable descriptions, factor loadings, and other information. An explanation of the information provided is given at the start of Part I.

2. The nature of each factor and the tests which measure it. In Part II, Factors, the section devoted to each factor includes a description of the factor, a list of the analyses that found it, comment about it, and a list of tests which have high loadings on it. An explanation of the information supplied will be found at the start of Part II.

3. The factorial composition of tests. In the back of this volume there is an index of variables (Index 1) which contains not only the references to analyses which include each variable, references to the factors, if any, upon which the variable has a high loading and where all loadings for the variable are summarized. The use of this index is explained at its start.

4. A collection of items and descriptions of variables. Incidental to the factorial studies compiled in this book are the descriptions in Part I of over 1200 different, personality variables.

Media of Personality Measurement.

In the aptitude and achievement domain essentially all measurement is made by means of objective tests. This is possible because aptitude and achievement is concerned with the responses that the subject can make to an easily controlled stimulus. Personality, on the other hand, is concerned not with what the subject can do in response to an easily controlled stimulus, but what he does do in an uncontrolled complex situation.

Below are listed the kinds of media used in the analyses surveyed. The symbols beside each are used in the tables of loadings and in the lists of variables in Part II.

C = Clinical observation. The data is gathered by direct observation without the use of special scales or by direct measurement using recognized clinical instruments.

I = Interest inventory. Self-response inventories or single items asking about interests.

J = Attitude scale. Self-response inventories, scales or single item questions asking about attitudes.

Q = Personality questionnaire. Self-response questionnaires or single items asking about one's habitual behavior patterns.

R = Behavior rating. Quantitative ratings of specific types of behavior made by one or more observers.

T = Objective test score.

Cattell[1] summarized both factorial and intercorrelation studies of personality factors in 1946. His method of surveying was to summarize each measurement medium separately and then to indicate the likeness of the factors found in each. In this book all media are treated together, but are marked by the above letter symbols. In Part II it will be seen that about one third of the factors arise from a single medium, the rest from combinations of 2, 3, or 4 media. Unfortunately, a large majority of the analyses deal with one medium only. This means that cross-identification between many analyses had to be made on psychological grounds alone without the benefit of overlapping variables. Factor Pe affords a good example of where one analysis, SaB, serves well in bridging the R and Q media. In that same factor a group of T variables from Analysis BrA afford an example of a purely psychological cross-identification.

Comparison of Personality with Aptitude-Achievement Domains.

Although the sheer number and size of analyses of personality measurements is, perhaps, only a little smaller than that of aptitude-achievement measurements, the personality domain remains a good deal less well described. The principal reason for this is that the instruments for measuring personality are less good than those for measuring aptitude-achievement. It is not necessary to decide whether this is because personality is more difficult to measure or whether less effort has been spent on trying to measure it, or both. To improve the situation, it will be necessary either (1) to learn better how to compare the measurements made in the different media or (2) to devise a sufficient variety of objective personality tests. Cattell, in spite of some errors and misinterpretations, is outstanding for his valiant strides in both of those directions. His summary of 1946;[1] his *Analysis CSA*, and Saunder's *Analysis SaB* show how the same factors are showing up in the different media. His work described in *Analyses CaD*, *CaF*, *CaG*, *CM*, and *CT* show advances in the measurement of personality by objective tests. In these studies, however, it has been very difficult not only to cross-identify the test factors with the factors found in other media, but also to interpret the test factors within their own medium.

---

[1] Cattell, R. B. Description and Measurement of Personality. World Book Co., Yonkers-on-Hudson, N. Y., 1946, Pp. xx plus 602.

In the introduction to *Psychometric Monograph, No. 5* a section was devoted to a discussion of genetic and experiential factors. The point was made that the aptitude-achievement domain, as its name implies, included factors defining a continuum from almost purely genetic to almost purely experiential. This point and all of the discussion of that section is equally pertinent to the Personality domain. Among the personality factors at least a considerable part of the continuum is represented, but we have no way of knowing very accurately where upon it any factor should be placed. *Emotionality* is a factor that probably lies close to the genetic end, while *Interest in Science* must lie close to the experiential end.

Another section of the introduction to *Psychometric Monograph, No. 5* discussed a parsimonious hypothesis of factorial structure. The point was made that there is insufficient evidence to support the assertion that there exists a hierarchy of factors, i.e., first-order or primary factors that belong to a given second-order factor and lower-order factors into which the first-order factors may be split. The conclusion is reached that a more proper hypothesis at this stage is to suppose that mental structure contains a rather large number of frequently overlapping, causally unrelated factors, which vary greatly in comprehensiveness and nature of origin. Although a few analyses investigate a limited area (*BT*, *CT*, *Kr*, *RTB*, and *St*), in no instance has any investigator reported an analysis designed to find the subordinate parts of or designed to make a detailed study of any single previously separated personality factor. On the other hand, there have been several studies aimed in the opposite direction, that of analyzing factor scores. *Analyses Lo*, *No*, and *ThB* analyze Guilford's factor scores. The resulting factors are not too clear, but, in any case, it can be said that no convincing second=order factor was found. *Analysis BaA* goes one step further; it analyzes the factors found in *Analysis ThB*. The resulting "third-order" factors make some psychological sense and can be likened even to some of the frequently found "first-order" factors. However, no identifications will be risked here.

Cross-Identification.

Unfortunately the interpretation of factors on the basis of the amount of evidence frequently afforded is a matter of very uncertain judgment. For this reason, although the uncertain interpretations were the ones which required most thought and have at least a fair amount of evidence supporting them, the writer feels that they are tentative. As a warning to the reader, about 25% of the factor identifications are marked as uncertain. Identifications were not forced; where evidence for an interpretation was not reasonably adequate no interpretation was made. Since cross-identification frequently depended on a subjective comparison of different tests, it did not seem possible to use a statistical criterion for confidence in the cross-identifications. One could be used for comparison between analyses using a large group of tests in common, but this did not occur sufficiently often to make cross-identification by statistical methods feasible as a general approach. As explained in an earlier section, not only were common items relatively infrequent, but differences in measurement media made it necessary to base many of the identifications purely on psychological insight.

---

[1] Ibid.

Table 1 summarizes the cases where there is substantial overlap between analyses. A few cases of scattered common variables occur in addition to those mentioned in the table.

Table 1

Overlapping Analyses

Overlapping analyses	Amount overlap[1]	No. of common variables	Subjects[2]	Nature of common variables
Abl,Ab2	all	17	different	MMPI scales and PMA tests
WL1,WL2	all	12	different	MMPI scales
Abl,Ab2,Co,CW WL1,WL2	some	11	different	MMPI scales
Ty,Abl,etc.	some	9	different	MMPI scales
CD,Co,CP,FH,Sg,ThA	some	various	different	Strong Interest scales
Co,MD	some	4	different	Bell Inventory scales
Du,FH	full	6	different	Allport-Vernon scales
FT1,FT2	all	12	different	Terman-Miles scores
CaF,CM	some	20	different	Ergs, sentiments
CaB,CaC	all	36	different	Behavior ratings
CaB,CaC,SaB	some	35	same	Behavior ratings
CaE,SaB	full	80	same	Questionnaire items
Lo,ThB	all	13	same	Guilford's factors
No,Lo,or ThB	full	5	different	Guilford's factors
CE,Ey	all	39	same	Clinical observations
GuB,RTC	all	30	same	Questionnaire items
GuC,RTD	all	23	same	Questionnaire items
WB,WM	all	20	different	Clinical observations
WH,Wi	some	44	different	Clinical observations
WB or WM,WH or Wi	full	20	different	Clinical observations

[1] *All* indicates that all variables match.
Full indicates that every variable in the smaller analysis matches a variable in the larger.
Some indicates that not all the variables in either analysis are matched.

[2] *Different* indicates entirely separate analyses.
Same indicates that both analyses were based on the same or substantially the same raw data.

Tucker[1] has developed a Coefficient of Congruence which evaluates the similarity of 2 factors with common variables in somewhat the same way as a product-moment correlation between the loadings of the common variables, but his coefficient is easier to compute. This report also develops a method for rotating the factors in separate analyses so as to be maximally congruent. For purposes of this survey no re-rotations were made. Tables 2, 3, and 4, give the results of computing the Coefficient of Congruence between factors for the pairs of Analyses CaB-CaC, Abl-Co, and WB-WM, respectively.

Table 2

Coefficients of Congruence between Analyses CaB and CaC

CaB Factors			CaC Factors			
No.	Author's Code	Code	No.	Author's Code	Code	Coefficient of Congruence
1	E	Do?	4	E'	?	.292
2	G	Pe	3	G	Pe	.605
3	H	So?	7	H	So?	.528
4	F	Su	5	F	Su	.544
5	A	A	2	A	A	.589
6	K	Cu	6	K	Cu	.444
7	B	G	9	B	G	.645
8	I	Se-Ei?	11	D	Ei	.292
9	J'	?	1	C	E	.375
10	M	Cv	10	M	Cv	.427
11	L	?	8	N	Sf	.061

Table 3

Coefficients of Congruence between Analyses Abl and Co

Abl Factors			Co Factors			
No.	Author's Name	Code	No.	Author's Name	Code	Coefficient of Congruence
II	Maladjustment	Pc	B	Serious Maladjustment	Pc	.966
III	Emotional Reactivity	E?	D	Hypochondriasis or Neurotic	E	.765

---

[1] Tucker, L. R, A method for synthesis of factor analysis studies, 1951, PRS Report No. 984, Personnel Research Section, Dept. of the Army.

Table 4

Coefficients of Congruence between *Analyses WB* and *WM*

WB Factors			*WM* Factors			Coefficient of Congruence
No.	Author's Name	Code	No.	Author's Name	Code	
I	Anxiety	Ax	I	Anxiety	Ax	.907
II	Mania and Excit.	Ma-Ex-Dt?	II	Schiz.-Excit.	Dt-Ex?	.850
II	Mania and Excit.	Ma-Ex-Dt?	III	Minus Depression	Ma	.420
III	Paranoid Schiz.	Ps	IV	Paranoid Schiz.	Ps	.774
IV	Depressed, Deteriorated	Dt	II	Schiz.-Excit.	Dt-Ex?	.508

With regard to Tables 2, 3, and 4, 2 points bear discussion:

1. At least partly because of the very high loadings in *Analyses Abl* and *Cc* as compared to loadings in *CaB* and *CaC*, the Coefficients of Congruence for *Abl* and *Co* are very high compared with those in *CaB* and *CaC*. This brings about a situation where the writer has accepted identifications with coefficients as low as .427, while he cannot fully accept one of .765 (primarily because of a loading of only .19 on *Abl-9* for *Factor III*). General size of loadings in a positive direction has an influence on the coefficient that goes beyond a reflection of the rank order of the variables defining the factors.

2. The computations of the Coefficient of Congruence that are reported here led to one change in the writer's identifications: *Factor II* in *Analysis WM* was changed from *Dt* to *Dt-Ex?*. This change was suggested by the relatively high coefficient of .850 relating this factor to *Factor II* of *Analysis WB*. This change is also in the direction of agreement with the interpretation made by the author of the analysis. This instance reveals that, in making these particular factor interpretations, the writer gave more weight to the 3 or 4 variables with the highest loadings and less weight to variables with moderate loadings than did either the formula for congruence or the author of the analyses.

Composite Factors

The section of *Psychometric Monograph, No. 5* concerned with the "parsimonious hypothesis of factorial structure" also discusses and illustrates composite factors. In that survey, however, the matter was dropped simply with that warning. Where composite factors seemed to contain a preponderance of one, the identification of the preponderant factor was made; a question-mark would signify the factor's impurity. Where the composite factor seemed to combine nearly equal amounts of 2 factors (where its vector nearly bisected the angle between the vectors of 2 factors), the factor was left unidentified. In this survey the same procedure is followed: where there is a preponderance of one factor, identification is made with a question-mark and is sometimes explained in a footnote at the bottom of the table of loadings. Where two or more factors seem to be combined with nearly equal weights, the identification is not made, but the combination is indicated in a footnote, and the list of analyses with each factor in Part II includes these combination factors. A note written for publication in the Psychological Bulletin by Wayne Zimmerman and a rejoinder by the writer explain the dangers to interpretation caused by these combination factors and their proper treatment in a survey of this kind.

PART I

ANALYSES

Part I presents the pertinent information for the interpretation of each of the factor analyses covered by this survey. The analyses are presented in alphabetical order by a code designation which corresponds wherever possible to the first two letters in the author's name. Where the report is written by more than one author, the code is ordinarily the initials of the first 2 authors. In the cases of Analyses Ab, Ft, St, and WL, the same battery of tests is given twice, and separate analyses are reported in the same article. To distinguish the tests as used in each of the two analyses, the number 1 or 2 follows the code letters. The code designation appears at the top of every page of Part I. An index of authors' names (Index II) is included at the back of the book. The Table of Contents for Part I will serve as a list of the analyses and a key to the code letters used. For each analysis the following information is given:

1. The full reference to the article describing the analysis and the full reference to the source of data used in the analysis if this data was borrowed. Since these references are given with the analyses, it was considered unnecessary to present a separate bibliography. It is not within the scope of this survey to review the many hundreds of articles on factor theory or to review the articles which contain factor studies not included in this survey for the reasons described in the Introduction.

2. The number and description of the subjects.

3. A note on any peculiarities or unusual techniques used in the analysis.

4. A description of each of the variables used in the analysis. Where the same variables are used in more than one analysis, appropriate reference is made for finding their description. Sometimes they require naming only or a description so short that a description other than that provided by the table of loadings is not necessary. In various parts of the survey the length of mention of the variables had to be made to fit space requirements. That is, the description in the beginning of the analysis is the complete one; those in Part II are briefer; those in the index are still briefer and altered to fit alphabetical requirements; and those in the table of loadings are usually briefest of all.

5. Factor names. The factor names or short interpretive descriptions given by the authors of the analyses are given at the top of the loadings tables. These are given whether or not they were considered tentative or definite by the authors. Two lines of symbols at the top of the table designate the factors. The upper line, labeled "Identifications," gives the code letters of the factors as identified in at least 2 analyses by the present writer. The key to the code letters is provided by the Table of Contents for Part II. A question mark with the code letters indicates an uncertain identification. A question mark by itself indicates that no identification was reasonably possible. Other situations are explained in footnotes. The second line of symbols are those used by the author of the analysis; these correspond with the ones used with the author's factor names.

ANALYSES

6. The table of factor loadings. The heading for this table tells whether rotation was orthogonal or oblique. For ease of reference, only "significant" loadings appear in the tables. Significance for this purpose has been arbitrarily defined as .25 or over. Communalities and reliabilities computed on the same group of subjects are reported in the same table when these are available. For simplicity all decimal points have been omitted. The table also contains the symbol denoting the medium of measurement (see the Introduction) and a very brief name or note to indicate the variable.

7. Intercorrelations of the factors. For analyses using oblique rotation, a table of the intercorrelations of the factors is included when the author of the analysis has provided these data.

8. Supplementary Analysis List. At the end of Part I there appear the references to analyses whose omission from full treatment in the survey is not entirely based on the principles of selection laid down in the Introduction. A brief explanation for their omission is made.

ANALYSIS Ab

Abrams, E. N. A comparative factor analytic study of normal and neurotic veterans. 1949. Thesis, Univ. of Michigan. Univ. Microfilm, Ann Arbor, Mich.

The subjects were 201 veterans, who were seeking and receiving treatment at the V. A. installations, and 117 normals. In the neurotic group, the veterans were between the ages of 20 and 30, male, white, and were elementary school graduates; they had pensionable disabilities. The 117 normals were veterans and comparable in all respects, except for psychiatric diagnosis. Separate analyses were made for the normal and neurotic groups.

Variables 1-6 are the Primary Mental Ability scores of Thurstone, named in the table of loadings. Variables 7-17 are scores of the MMPI (see Analysis Co).

LOADINGS ON ORTHOGONAL FACTORS FOR NORMALS

I. Not Interpreted
II. Adjustment
III. Emotional Reactivity
IV. Externalization Tendency

No.	Variable	Identifications: ? I	Pc -II	E? III	?[1] -IV	h^2
Abl- 1	T:Number	--	-33	--	--	16
Abl- 2	T:Verbal	--	-49	47	-34	59
Abl- 3	T:Space	--	-30	--	--	11
Abl- 4	T:Word Fluency	--	-45	--	--	30
Abl- 5	T:Reasoning	--	-68	--	--	51
Abl- 6	T:Perceptual Speed	--	--	--	--	05
Abl- 7	Q:Lie score	28	--	--	--	13
Abl- 8	Q:Validity Scale	--	57	--	--	39
Abl- 9	Q:Hypochondriasis	25	--	--	53	39
Abl-10	Q:Depression	37	--	49	26	44
Abl-11	Q:Hysteria	33	--	55	--	41
Abl-12	Q:Psychopathic Deviate	--	50	--	--	26
Abl-13	Q:Masc.-Fem.	--	33	33	--	22
Abl-14	Q:Paranoia	--	32	32	--	22
Abl-15	Q:Psychasthenia	--	81	--	--	67
Abl-16	Q:Schizophrenia	--	85	--	--	74
Abl-17	Q:Hypomania	--	55	27	--	39

---

[1] This may be a sub-factor of E.

Ab

LOADINGS ON ORTHOGONAL FACTORS FOR NEUROTICS

I. Maladjustment
II. Verbal-Reasoning
III. Severity
IV. Intellectual with element of self-deception

	Identifications:	?[1]	G?	?	?	
No.	Variable	I	II	III	IV	h^2
Ab2- 1	T:Number	--	35	--	42	33
Ab2- 2	T:Verbal	--	44	--	54	51
Ab2- 3	T:Space	--	--	--	41	19
Ab2- 4	T:Word Fluency	--	--	--	55	36
Ab2- 5	T:Reasoning	--	53	--	43	49
Ab2- 6	T:Perceptual Speed	--	--	--	26	11
Ab2- 7	Q:Lie score	--	--	--	55	30
Ab2- 8	Q:Validity Scale	39	--	58	-28	60
Ab2- 9	Q:Hypochondriasis	86	--	--	--	75
Ab2-10	Q:Depression	84	--	26	--	77
Ab2-11	Q:Hysteria	82	--	--	--	72
Ab2-12	Q:Psychopathic Deviate	32	--	64	--	58
Ab2-13	Q:Masc.-Fem.	--	--	58	--	45
Ab2-14	Q:Paranoia	50	--	56	--	58
Ab2-15	Q:Psychasthenia	77	--	45	--	82
Ab2-16	Q:Schizophrenia	78	--	52	--	89
Ab2-17	Q:Hypomania	--	--	52	--	37

---

[1] Probably a combination of *E* and *Pc*.

ANALYSIS BaA

Baehr, M. E. A factorial study of temperament. Psychometrika, 1952, 17, 107-126.

This is an analysis of the intercorrelations of factors found in Thurstone's analysis of Guilford's 13 factorial scores (see Analysis ThB).

LOADINGS ON OBLIQUE FACTORS

I. Emotionally Stable
II. Primary Function
III. Activity
IV. Emotionally Unstable

No.	Identifications: Variable	? I	? II	? III	? IV	h^2
BaA-1.	Q:R, Reflective	--	--	--	37	22
BaA-2.	Q:S, Sociable	79	--	--	--	64
BaA-3.	Q:E, Emotional	62	--	47	-55	84
BaA-4.	Q:V, Vigorous (Masculine)	--	--	52	--	38
BaA-5.	Q:D, Dominant	--	80	--	--	67
BaA-6.	Q:A, Active	-46	--	40	--	50
BaA-7.	Q:I, Impulsive	--	85	--	--	88
BaA-8.	Q:X_1, Self-confident	73	--	49	--	77
BaA-9.	Q:X_2, No interpretation	--	--	--	--	06

ANALYSIS BaB

Baehr, M. E. A factorial study of temperament. *Psychometrika*, 1952, *17*, 107-126.

This is an experiment using questionnaire inventory items which would cover the concepts embodied in the factors described in the "second-order analysis" of the Guilford-Martin data, *Analysis BaA*, and, in addition, the concepts embodied in the general Emotionality factor in the conceptual scheme of Heymans and Wiersma. The 22 behavior-rating items were combined in all possible pairs and presented randomly in a single schedule. For each pair the rater was asked to underline that item which, in general, was more descriptive of the behavior of the person he was rating. The rater was urged to make a choice, but was permitted to mark both words or to mark neither word. For each person, the score for each item was the number of times it was underlined in the schedule. Completed schedules were obtained for a sample of 200 subjects. Communalities were stabilized after two successive factorings by the centroid method.

LOADINGS ON OBLIQUE FACTORS

A. Primary Function
B. Emotionally Stable
C. Activity
D. Hypomania (Primary Function and Emotionally Unstable)
E. Amiability?
F. "Social Butterfly"?

	Identifications:	Pe	?	Ss?	Su	A	So?	
No.	Variable	A	B	C	D	E	F	h^2
BaB- 1.	R:Agreeable	--	30	--	--	39	--	58
BaB- 2.	R:Cheerful	--	56	--	--	--	--	66
BaB- 3.	R:Cooperative	--	--	--	--	60	--	65
BaB- 4.	R:Decisive	--	--	42	--	--	--	72
BaB- 5.	R:Demonstrative	-42	-41	--	--	--	--	54
BaB- 6.	R:Emotionally Stable	--	42	38	-32	--	--	76
BaB- 7.	R:Energetic	--	--	--	54	--	--	46
BaB- 8.	R:Enthusiastic	--	--	--	53	--	--	49
BaB- 9.	R:Even-tempered	--	46	--	-37	--	--	65
BaB-10.	R:Happy-go-lucky	-32	--	--	--	-34	--	53
BaB-11.	R:High-strung	--	-60	--	--	--	--	65
BaB-12.	R:Impulsive	-56	-56	--	--	--	-28	81
BaB-13.	R:Lively	--	--	--	48	--	--	67
BaB-14.	R:Persevering	45	--	--	--	--	--	69
BaB-15.	R:Prompt Starter	29	--	--	--	--	-32	61
BaB-16.	R:Quick Worker	--	--	--	--	--	-55	55
BaB-17.	R:Seeks Company	--	--	-52	--	--	43	53
BaB-18.	R:Self-confident	--	--	42	--	--	32	64
BaB-19.	R:Socially at Ease	--	--	--	--	--	51	43
BaB-20.	R:Steady Worker	47	--	--	--	--	--	74
BaB-21.	R:Sympathetic	--	--	--	--	50	--	39
BaB-22.	R:Talkative	--	--	-32	--	--	--	42

INTERCORRELATIONS OF THE FACTORS

	A	B	C	D	E	F
A		46	-50	67	-10	43
B	46		-07	19	34	33
C	-50	-07		-50	07	11
D	67	19	-50		-33	18
E	-10	34	07	-33		-20
F	43	33	11	18	-20	

ANALYSIS BC

Barnes, C. A. A statistical study of the Freudian theory of levels of psychosexual development. Genet. Psychol. Monog. 1952, 45, 105-175.

The subjects were 266 male students, principally Liberal Arts majors, selected from 11 classes of General Studies at the University of Southern California. They ranged from 17 to 31 years in age, with a median age of 23. Testing was done in groups of 40 to 70. Tetrachoric correlations were used.

Each variable consisted of the score on 5-10 yes-?-no items mixed into a questionnaire having 255 items in all. The variables with some sample items were as follows (the direction of the variables is not clear in all cases):

BC- 1. Pessimism.

BC- 2. Cleanliness. a. You like to wash your hands before every meal. b. A little dirt never hurt anyone.

BC- 3. Exhibitionism. a. You pay little attention to styles in clothing. b. You would like to have a new model car every year.

BC- 4. Covert Aggression.

BC- 5. Impatience. a. It is boresome to wait for a slow person to finish what he is saying or doing.

BC- 6. Self-confidence. a. You feel your abilities are adequate. b. You can hold your own with others socially.

BC- 7. Overt Aggression. a. You admire go-getters. b. Attack is probably the best defense.

BC- 8. Sadism. a. Most husbands and wives would be happier if they resorted to caveman tactics occasionally.

BC- 9. Dependency. a. You would like to live with your parents as long as possible.

BC-10. Obstinacy. a. It is hard to admit defeat. b. Even when you are wrong, it is hard to admit it.

BC-11. Sex predation. a. Men are superior to women in most ways. b. Girls' education should consist mainly of things that are useful around the house.

BC-12. Punctuality. a. It is easy to excuse tardiness. b. You almost always rise at the same time in the morning and retire at the same hour at night.

BC-13. Biting. a. You have been free from a habit of nail-biting.

BC-14. Meticulousness. a. It is a waste of time to try to keep everything in its place all the time. b. "A place for everything and everything in its place" describes one of your habits very well.

BC-15. Curiosity.

BC-16. Money. a. All you desire from life is a moderate income. b. Money is one of the least important things in life.

BC-17. Defiant resentment. a. You often violate school regulations.

BC-18. Reliability. a. When you borrow something, you feel somewhat uneasy until it is returned.

BC-19. Law abidance. a. Cheating is permissable sometimes if it means avoiding failure in an important course. b. Sometimes cheating in an examination is all right when the instructor has been unfair.

BC-20. Overt aggression. a. If a person does not meet an obligation to you, you speak to him about it.

BC-21. Sex drive. a. You are probably more interested in the opposite sex than most. b. You have been troubled by doubts about your sexual adequacy.

BC-22. Anti-feminine feelings. a. A woman's place is in the home.

BC-23. Orderliness. a. There is little point in having things done just so. b. When you write a report, you reread it many times to make sure it is free of errors.

BC-24. Rigidity. a. Often when trying to think of a person's name, you find another name intruding.

BC

LOADINGS ON ORTHOGONAL FACTORS

I. Meticulousness
II. Externalized Aggression
III. Monetary Exhibitionism
IV. Puritanical Anti-feminism
V. Optimistic Self-confidence
VI. Independent Self-sufficiency
VII. Flexible Ascendance
VIII. Not interpreted
IX. Obstinate Anti-feminism
X. Not interpreted
XI. Masculine Dominance

Identifications:		Me	Do	Ei?	?	Sc?	Ss?	?	De?	?	?	Ix	
No.	Variable	I	II	III	IV	-V	-VI	VII	VIII	IX	X	XI	h^2
BC- 1.	Q:Pessimism	--	--	--	--	-59	--	--	--	--	--	--	51
BC- 2.	Q:Cleanliness	40	--	--	--	--	--	26	--	--	--	39	56
BC- 3.	Q:Exhibitionism	--	33	33	--	--	--	51	--	--	--	--	67
BC- 4.	Q:Covert Agression	--	--	25	--	-40	--	--	-42	--	--	--	53
BC- 5.	Q:Impatience	--	33	47	--	-28	--	--	--	--	--	--	47
BC- 6.	Q:Self-confidence	29	--	--	--	56	45	--	--	--	--	--	72
BC- 7.	Q:Overt Aggression	--	69	--	--	--	27	--	--	--	--	--	69
BC- 8.	Q:Sadism	--	50	--	--	--	--	--	--	-28	--	--	42
BC- 9.	Q:Dependency	30	--	--	--	-32	-46	--	--	--	--	--	53
BC-10.	Q:Obstinacy	--	28	--	--	--	--	--	--	36	--	--	38
BC-11.	Q:Sex Predation	--	29	--	--	--	--	--	--	--	--	52	41
BC-12.	Q:Punctuality	--	--	--	--	--	--	--	--	49	--	27	49
BC-13.	Q:Biting	--	47	--	--	--	-36	--	--	--	--	--	45
BC-14.	Q:Meticulousness	61	--	--	--	--	--	--	-29	--	--	--	54
BC-15.	Q:Curiosity	--	28	--	--	--	--	29	--	--	44	--	44
BC-16.	Q:Money	--	34	65	--	--	--	--	--	--	--	25	69
BC-17.	Q:Defiant Resentment	--	42	--	--	--	--	35	32	--	--	--	50
BC-18.	Q:Reliability	40	--	--	--	--	--	--	62	--	--	--	59
BC-19.	Q:Law Abidance	32	--	--	41	--	--	--	32	--	--	--	51
BC-20.	Q:Overt Aggression	-25	51	--	--	--	--	40	--	--	--	--	53
BC-21.	Q:Sex Drive	--	29	--	-26	--	--	--	--	--	--	45	48
BC-22.	Q:Anti-feminine Feelings	--	26	--	34	--	--	--	--	30	--	50	60
BC-23.	Q:Orderliness	73	--	29	--	--	--	--	--	--	--	--	69
BC-24.	Q:Rigidity	--	31	--	--	-47	--	-43	--	--	30	--	59

ANALYSIS Be

Bennett, E. Some tests for the discrimination of neurotic from normal subjects. Brit. J. Med. Psychol., 1945, 20, 271.

The subjects were 80 patients in a neurosis center and 80 ordinary patients from surgical and medical wards with no record of psychiatric or neurological disorder. It will be noted that any temporary neurotic tendencies due to hospitalization are thus controlled. Nearly all the subjects were soldiers, but few had suffered the stress of active service.

The battery was highly discriminating between the neurotics ("introverted" types requiring hospitalization and discharges) and normal hospital patients, but separate factor analyses indicated loadings (presented in the article) so similar that the groups were combined for a third analysis, the results of which are presented below.

Summation analysis was used with orthogonal rotation.

The Neurotic Inventory (Variables 1-3): Three sections of this were used, comprising clinical questions bearing upon anxiety, hysteria and depression, which are the most frequent syndromes in the neurotics. The numbers of positive and negative responses intended to indicate neurosis are roughly equal. The total of neurotic responses is scored in each section.

Be- 1. Anxiety. Sample: Are you often startled at a sudden noise? 8 items.

Be- 2. Hysteria. Sample: Have you ever walked in your sleep? 7 items.

Be- 3. Depression. Sample: Do you ever get down in the dumps for no reason at all. 8 items.

The Annoyances Test (Variables 4-7): This test lists 60 possibly annoying stimuli or situations of 4 kinds, 15 of each in random order. The subject is asked to indicate anything which irritates or annoys him. Numbers of annoyances recorded are scored in each section. The 4 kinds consist of two pairs: one member of each pair is intended to indicate neurosis, the other as a control. The 4 kinds are:

Be- 4. Annoyance due to frustration of self-assertion, for example: "Somebody pushes in front of you in a queue," and "Somebody tells you how to do your job." Responses in this section are expected to be normal, since the feeling is aroused by and directed against another person.

Be- 5. Annoyance due to personal inadequacy, for example: "You can't remember a name which is on the tip of your tongue," and "You forget what you are looking for." Responses here are expected to indicate neurosis, since the feeling is aroused by, and directed against, the self.

Be- 6. Annoyance due to dirt or untidiness, for example: "A child with a dirty face," and "An unmade bed." Responses here are expected to be normal, since things seen do not demand attention and avoidance is relatively easy, unless there is a positive interest in the environment.

Be- 7. Annoyance due to noise, for example: "A pneumatic drill," and "The sound of hammering." Responses here are expected to indicate neurosis, since the obtrusiveness of noise forces attention outwards and frustrates introverted trends.

The Pressey X-0 Test (Variables 8-10): Three sections of this test were used, substantially modified in accordance with the hypothesis. One hundred items are listed in each section; the total number of items crossed out is scored in each.

Be- 8. Items crossed out are those for which the subject thinks a person should be blamed. Those listed comprise questionable extraverted activities with an aggressive flavour, such as flirting, speeding, and bawling. It was expected that the neurotic, who tends to be innocent of such activities, would be more ready to express his moral feelings against them.

Samples:

1. gambling
flirting
speeding
drinking
giggling

2. panic
anger
distrust
scandal
contempt

Be- 9. Items to be crossed out are those about which the subject has at any time in his life felt worried, nervous, or anxious. Those listed are of a purely personal kind, such as loneliness, sweating, and falling. It was thought that the neurotic might have suffered and would certainly have attended to such experiences more intensely and that his facility for recalling them would be greater.

Samples:

1. loneliness
work
forgetfulness
teasing
browning-off

2. cruelty
headache
fault-finding
rudeness
depression

Be-10. Items to be crossed out are those which the subject likes or in which he is interested. Those listed are of an extraverted kind, football, comedians, talking, and the like. This section is intended as a measure of the range of objective interest, which should be diminished in the neurotic.

Samples:

1. swimming
boating
beaches
dirt-tracks
music-halls

2. camping
walking
boxing
running
amusement-parks

LOADINGS ON ORTHOGONAL FACTORS

I. Discrimination between normal and neurotic
II. Not interpreted as being outside of the purpose of the article.

No.	Identifications: Variable	Ax? I	? II	h^2
Be- 1.	Q:Anxiety	77	--	59
Be- 2.	Q:Hysteria	53	--	28
Be- 3.	Q:Depression	70	--	49
Be- 4.	J:Annoyance at frustration	--	74	56
Be- 5.	J:Annoyance at inadequacy	47	63	62
Be- 6.	J:Annoyance at dirt	--	64	43
Be- 7.	J:Annoyance at noise	54	40	45
Be- 8.	J:Pressey - Blames	--	52	28
Be- 9.	J:Pressey - Worries	49	43	43
Be-10.	J:Pressey - Likes	--	35	15

ANALYSIS Bo

Bolanovich, D. J. Statistical analysis of an industrial rating chart. *J. appl. Psychol.*, 1946, *30*, 23-31.

A 14-item rating scale used by the Radio Corporation of America for field engineering was used by 11 supervisors for 143 field engineers. Orthogonal rotation.

The items consisted of a trait name with an explanation of the trait. The rating was to be made in one of five numbered boxes. An attempt to curb bias was made by changing the order of the numbered boxes from item to item. The key to the scales read:

5 = Excellent (among the best 10%)
4 = Superior (among the best 1/3, but not in the best 10%)
3 = Good (in the middle 1/3)
2 = Fair (in the lower 1/3, but not in the lowest 10%)
1 = Poor (among low 10%)

Examples of the fully presented items are:

Bo-1. Personality: Cheerfulness and pleasantness in relations with others. Extent of friendships with associates and customers. Ability to hold confidence and admiration.

1	2	3	4	5

Bo-6. Resourcefulness: Success in handling routine and special problems without continual help. Activity in developing new applications, finding new needs for equipment. Suggestions for equipment, methods, procedures, and making new products.

4	5	1	2	3

Bo

LOADINGS ON ORTHOGONAL FACTORS

1. Meticulousness or Attendance to Detail
2. Ability to do present job
3. Sales Ability
4. Job Conscientiousness
5. "Organizing" or "Systematic" factor
6. Social Intelligence

	Identifications:	Me	?	?	De	J?[1]	A	
No.	Variable	1	2	3	4	5	6	h^2
Bo- 1.	R:Personality	38	--	37	--	--	63	80
Bo- 2.	R:Personal Appearance	57	--	34	--	38	26	66
Bo- 3.	R:Punctuality	33	--	--	68	--	28	66
Bo- 4.	R:Thoroughness	50	39	--	57	--	--	74
Bo- 5.	R:Efficiency	34	50	--	51	36	--	76
Bo- 6.	R:Resourcefulness	36	66	--	--	--	--	71
Bo- 7.	R:Dependability	32	38	--	64	--	39	80
Bo- 8.	R:Cooperation	--	33	30	38	25	58	74
Bo- 9.	R:Attitude Toward His Job	--	34	46	49	--	35	73
Bo-10.	R:Technical Ability	--	81	--	29	--	--	78
Bo-11.	R:Sales Ability	--	--	48	43	34	--	56
Bo-12.	R:Organizing Ability	--	34	--	51	42	30	66
Bo-13.	R:Judgment	--	39	--	36	49	47	75
Bo-14.	R:Desire for Self-Improvement	--	28	--	45	--	46	49

[1] Judgment, See Psychometric Monograph No. 5.

ANALYSIS BrA

Brogden, H. E. A factor analysis of forty character tests. Psychol. Monog., 1940, 52, No. 3, 39-55.

The subjects were sixth-grade boys in 11 public school classes. Obtaining complete data required reducing the number of cases actually used to 100 for most variables with slightly fewer cases on some variables. In reducing the number of cases there was selection in the direction of greater intelligence and higher scores on the character tests.

BrA- 1. Maller Self-Marking Test. This is a simple achievement test covering such topics as geography, history, and arithmetic. However, mixed with questions of a sixth-grade caliber are many far above this level. A key was enclosed and the grading done by the student himself, in order that he might have ample opportunity to cheat. His score is the number of correct answers given by the subject to those questions known to be beyond his ability.

BrA- 2. Coordination Test. This test of Hartshorne and May measures the tendency of the child to "peep" in order to obtain a good score on a task which should be done with the eyes closed.

BrA- 3. False Book List. This test of Raubenheimer consists of a list of book titles which are to be checked by the child if he wishes to indicate that he has read them. Since many of the titles are fictitious, an overstatement score can be obtained by determining the number of fictitious titles the child claims to have read.

BrA- 4. Overstatement Test. The child is asked to state the degree of his knowledge of a number of topics and is then given a test designed to determine the validity of his claims. The score is the difference between the claims of the child and his achievement score.

BrA- 5. Suggestibility Score. Four test scores are combined since their intercorrelations are low (!). The first 2 are forms A and B of the Otis suggestibility test which include a variety of item types. In the third, the child is shown many pairs of words, some of which pairs, actually determined by chance, are stated to be extensively used as synonyms. The child is asked to indicate those pairs made up of words which he would most often use as synonyms. Presumably the suggestible child would choose the pair stated to be used most extensively. In the fourth test, it is suggested that ink blots resemble objects or animals which they may or may not resemble. Here again the child may accept the suggestion by indicating that he sees the supposed similarity. High score indicates non-suggestibility.

BrA- 6. Persistence Adding. Thirty groups of two-number additions were administered in consecutive periods of 45 seconds each. Since adding speed decreases in the later periods, a measure of persistence was determined from this decrease. High score made to indicate persistence.

BrA- 7. Persistence Stories. The test measures the child's persistence in completing a story which becomes increasingly difficult to read after the point of suspense has been reached. The material is run together, the capitals and small letters are misplaced, and the words are improperly spaced.

BrA- 8. Picture Inhibition Test. The score on this test of Hartshorne and May is the difference between the average number of additions completed each period under normal conditions and the average of those finished each period with distractions such as jokes, puzzles, and stories printed directly above the additions. (Scores reversed).

BrA- 9. Picture Inhibition Persistence. A persistence score was derived from the Picture Inhibition Test, by taking the difference between the average of the first two and the average of the last two groups of additions. (Scores reversed).

BrA-10. Slang "A" Score. The score was that yielded by Schwesinger's tests of knowledge of slang words and slang expressions.

BrA-11. Slang "C" Score. In answering the questions in the multiple choice division of the slang knowledge test, the subjects could usually make two correct choices, one of which was a slang expression. The "C" score is simply the number of times the subject used a slang expression in making a correct choice.

BrA-12. Variability Score. The standard deviation of the thirty addition scores obtained from BrA- 6.

BrA-13. Questionable Reading Preferences. This test, devised by Raubenheimer, consists of a list of 10 book titles, which the child ranks in the order of his preference. It is designed to select children who show interest in reading matter which is judged to be unwholesome.

BrA-14. Questionable Character Preferences. 14-19 are from Form B-1 of the Opinion Ballots of Hartshorne and May. This one contains a list of character descriptions of widely differing "goodness." After the child ranks them in the order of his preference, his score is obtained by adding the differences between his ranking and that of competent judges.

BrA-15. Questionnaire on Authority. By encircling either all, most, many, few or no before a list of statements, the child expresses his opinion about various aspects of authority.

BrA-16. Questionnaire on Success and Helpfulness. One questionnaire on the connection between success and such items as pull, trickery, a clear conscience or going to church combined with another questionnaire giving a variety of situations where subject says whether or not he would be willing to help other individuals.

BrA-17. Questionnaire on Honesty. The child is asked if he would cheat in a variety of situations and is scored by the number of affirmative responses.

BrA-18. Questionnaire on Duty. In this test, a series of choices are presented to the subjects. The choices usually involve an opposition between duty and pleasure, or between negligence of duty and pain or discomfort.

BrA-19. Stories Test. This test by Chambers consists of a series of stories attempting to present life-like situations involving ethical choices.

BrA-20. Controlled Association. This test was designed by Raubenheimer to determine the habitual reactions of subjects to social and educational institutions. The subject has to make his choice of the most suitable of several statements concerning a number of such institutions.

BrA-21. S Perseveration Test. To obtain the score on this test the speed of writing S's forward, writing them backward, and alternating forward and backward must be determined. The number completed during the alternation period is then divided by the average of the scores for the other two periods. (Scores reversed).

BrA-22. V Perseveration Test. This test is the same as test 21 except for the use of a different letter.

BrA-23. Add-Subtract Perseveration Test. This test consists merely of a series of two-number additions and subtractions. The letters A and S over each problem indicate whether the subject should add or subtract.

BrA-24. Test of Conscientiousness. While the Pressey X-O test was administered, it developed during the scoring that a large percentage had failed to complete all the procedures called for by the directions. Consequently, it was included in the battery not as a test of emotional maturity but as a measure of faithfulness in the carrying out of directions.

BrA-25. Deportment Grade. Average of monthly deportment grade for the first semester.

BrA-26. Grades. Average grade for the first semester.

BrA-27. Personality I. A measure of social adjustment derived from Woodworth's inventory. Weights used in determining this score were the result of a previous unpublished factor analysis made by the writer.

BrA-28. Personality II. This, a second factor found in the Woodworth inventory, seems to be a measure of self-sufficiency.

BrA-29. Variability II. This score was obtained from the Otis Intelligence Test by calculating the standard deviation of the 10 standard scores of the sub-tests.

Variables 30-39 are the subtests of the Otis Intelligence Test. The names are given in the table of loadings.

BrA

LOADINGS ON ORTHOGONAL FACTORS[1]

I. 'W' factor of Webb and Spearman school?
II. An honesty factor
III. A persistence factor
IV. An intellectual factor
V. Achievement and attitudes?
VI. A self-control factor
VII. An "acceptance of the moral code" factor
VIII. A meaningless factor

	Identifications:	Wi	Ho	Pe	G	V?[2]	?	A?	?	
No.	Variable	I	-II	III	IV	V	VI	VII	VIII	h^2
BrA- 1.	T:Lie score	--	-59	--	--	--	--	--	--	42
BrA- 2.	T:Peeping score	--	-63	--	--	--	--	--	--	52
BrA- 3.	T:False Book List	--	-55	--	--	--	--	--	27	44
BrA- 4.	T:Overstatement	--	-53	--	--	--	--	--	--	43
BrA- 5.	T:Resistance to suggestion	53	--	--	--	--	--	--	--	39
BrA- 6.	T:Persistence Adding	29	--	53	--	--	--	--	--	46
BrA- 7.	T:Persistence Stories	--	--	--	30	--	--	--	--	26
BrA- 8.	T:Picture Inhibition Persist.	--	--	50	--	--	--	--	--	31
BrA- 9.	T:Picture Inhibition Persist.	--	--	58	--	--	--	--	--	39
BrA-10.	T:Slang "A"	--	--	--	--	60	--	--	--	57
BrA-11.	T:Slang "C"	--	--	--	--	-28	55	--	--	42
BrA-12.	T:Non-variability in adding	--	--	52	--	--	--	--	--	34
BrA-13.	I:Poor Reading Pref.	--	--	--	--	36	44	--	--	35
BrA-14.	I:Poor Character Pref.	31	-34	25	--	--	--	--	--	47
BrA-15.	J:Authority	--	--	--	--	34	--	30	--	44
BrA-16.	J:Success and Helpfulness	--	--	--	--	35	--	41	--	37
BrA-17.	J:Honesty	--	-31	--	--	--	--	56	--	42
BrA-18.	J:Duty	--	--	--	--	47	51	--	--	59
BrA-19.	J:Stories Test	--	--	--	--	44	--	32	34	50
BrA-20.	J:Controlled Assoc.	--	--	--	--	--	--	--	48	48
BrA-21.	T:S Perseveration	-46	--	27	--	--	--	--	--	42
BrA-22.	T:V Perseveration	-38	-26	33	--	--	--	--	--	35
BrA-23.	T:Add-Subtract Persev.	--	--	36	--	--	--	--	42	36
BrA-24.	T:Conscientiousness	37	--	26	--	--	--	--	--	33
BrA-25.	R:Deportment	--	--	--	--	--	--	26	36	24
BrA-26.	T:Grades	--	--	37	--	40	--	--	--	48
BrA-27.	Q:Social Adjustment	--	--	--	29	--	--	44	--	47
BrA-28.	Q:Self-sufficiency	--	--	--	--	--	40	--	--	36
BrA-29.	T:Non-variability II	--	--	--	26	--	--	--	--	22
BrA-30.	T:Otis - Vocabulary	--	--	--	--	55	--	--	--	54
BrA-31.	T:Otis - Dis. Sent.	--	--	--	--	34	--	--	--	42
BrA-32.	T:Otis - Proverbs	--	--	--	33	42	--	27	--	66
BrA-33.	T:Otis - Arithmetic	--	--	--	39	36	--	--	--	59
BrA-34.	T:Otis - Analogies	--	--	--	58	--	--	--	--	56
BrA-35.	T:Otis - Similarities	--	--	--	65	--	--	--	--	56
BrA-36.	T:Otis - Memory	--	--	--	38	--	--	--	50	65
BrA-37.	T:Otis - Directions	--	--	--	64	--	--	--	--	58
BrA-38.	T:Otis - Geom. Fig.	--	--	--	51	--	32	--	--	56
BrA-39.	T:Otis - Narrative Comp.	--	--	--	40	--	--	25	26	58
BrA-40.	T;Otis - Total	--	--	--	58	39	--	--	30	100

---

[1] Rotation is orthogonal except that Factor IV was rotated obliquely by an undisclosed amount with Factor V. Only the Factor IV loadings differ from those of the orthogonal rotation.

[2] Verbal, see Psychometric Monograph No. 5.

ANALYSIS BrB

Brogden, H. E. A multiple-factor analysis of the character trait intercorrelations published by Sister Mary McDonough. J. educ. Psychol., 1944, 35, 397-410.

The intercorrelation data used for this study were those of McDonough, Sister Mary. The Empirical Study of Character. The Catholic Univ. of Amer., Washington, D. C., 1929, pp. 193. The subjects were students in a parochial school, 20 boys and 30 girls aged 13 ± 1.25. Ratings were made on 34 characteristics by three teachers, all of whom had frequent contact with the children. If the ratings of one judge were found to correlate less than .6 with those of the other two judges, ratings for that judge on that item were discarded, and if the intercorrelations of all judges fell below .6, that item was discarded. To increase the reliability of the data, behaviorly defined subtraits were assembled, rated, and intercorrelated to eliminate traits that were overcomplex. Multiple-factor analysis by the centroid method was employed with extraction of 5 factors; the fifth one was later discarded as contributing nothing to simple structure. Oblique rotation.

The traits used for ratings are listed in the table of loadings. A few whose descriptions go beyond the trait names are as follows:

BrB- 1. Will. Persistence in school work, attentiveness in spite of distractions and the keeping of resolutions.

BrB- 4. Reliability. Preparation of homework, keeping of promises, honest scoring of papers, diligence without supervision.

BrB- 5. Attitude toward work. Diligence in school work.

BrB- 9. Respectfulness. Politeness and courtesy.

BrB-10. Generosity. Tendency to think of others, not to expect others to wait on him to offer help, forgive those who hurt him, to be unselfish.

BrB-27. Expressiveness. Tendency to be easily moved to anger or grief, to recover composure quickly, to get excited over trifles, to become confused easily, not to be stiff or sedate, to give vent to feelings without restraint, to be spontaneous, not to be quiet or calm, and not to be certain of one's self.

BrB-34. Forwardness. Timidity, modesty, tendency to be retiring, and lack of desire to recite or run errands.

BrB

LOADINGS ON OBLIQUE FACTORS

I. Goodness of classroom behavior
II. Sensitivity to social disapproval
III. Intelligence?
IV. Gregariousness

	Identifications:	De	Ei	G	A	
No.	Variable	I	-II	III	IV	h^2
BrB- 1.	R:Will	45	--	--	--	25
BrB- 2.	R:Attentiveness	--	-38	31	--	28
BrB- 3.	R:Truthfulness	--	-52	31	--	38
BrB- 4.	R:Reliability	49	--	30	--	34
BrB- 5.	R:Attitude toward work	61	--	--	--	39
BrB- 6.	R:Self-control	--	-53	--	--	32
BrB- 7.	R:Response to reproof	33	--	--	--	19
BrB- 8.	R:Obedience in class	55	--	--	--	30
BrB- 9.	R:Respectfulness	47	--	--	--	25
BrB-10.	R:Generosity	--	-40	--	36	34
BrB-11.	R:Stability	--	-44	--	--	23
BrB-12.	R:Religiousness	--	-43	--	25	27
BrB-13.	R:Refinement	--	-40	25	--	25
BrB-14.	R:Contentment	--	--	-37	52	49
BrB-15.	R:Independence	32	--	52	--	39
BrB-16.	R:Self-consciousness	--	-35	--	-43	38
BrB-17.	R:Cheerfulness	--	--	--	61	45
BrB-18.	R:Neatness in class	44	--	--	--	25
BrB-19.	R:Tendency to be sympathetic	--	--	--	69	51
BrB-20.	R:Intelligence	--	--	84	--	76
BrB-21.	R:Orderliness	--	--	--	-32	15
BrB-22.	R:Tendency to be affectionate	--	--	--	78	64
BrB-23.	R:Tendency to be active	--	--	65	27	53
BrB-24.	R:Humor	--	--	29	42	29
BrB-25.	R:Sociability	--	28	--	68	58
BrB-26.	R:Credulity	--	--	-80	27	73
BrB-27.	R:Expressiveness	--	48	33	38	49
BrB-28.	R:Tendency to look for sympathy	--	70	--	--	58
BrB-29.	R:Conceit	--	64	--	--	46
BrB-30.	R:Quarrelsomeness	--	64	--	--	43
BrB-31.	R:Irritability	--	59	--	--	38
BrB-32.	R:Impulsiveness	--	50	--	--	31
BrB-33.	R:Emotionality	--	42	--	--	27
BrB-34.	R:Forwardness	--	69	--	--	51

INTERCORRELATIONS OF THE FACTORS

	I	II	III	IV
I		77	03	-02
II	77		-05	-17
III	03	-05		-21
IV	-02	-17	-21	

ANALYSIS BT

Brogden, H. E., and Thomas, W. F. The primary traits in personality items purporting to measure sociability. *J. Psychol.*, 1943, *16*, 85-97.

The subjects were 365 students who had availed themselves of the testing service offered by the Psychology Department of the University of Illinois.

The responses to the items could be "Yes," "?," or "No." All "?" responses were combined with the least frequent of the other two categories so that tetrachoric correlations could be used. Analysis was done by the centroid method with oblique rotations.

No key to the test is given in the article. The response making psychological sense is printed in italics here. The key for most but not all of the items can be derived from the tables in the article which describe the individual factors.

BT- 1. Do you day-dream frequently? *Yes* No ?

BT- 2. Do athletics interest you more than intellectual affairs? Yes *No* ?

BT- 3. Are you slow in making decisions? *Yes* No ?

BT- 4. Do you think you could become so absorbed in creative work that you would not notice a lack of intimate friends? *Yes* No ?

BT- 5. Are you inclined to study the motives of other people carefully? *Yes* No ?

BT- 6. Do you ever heckle or question a public speaker? *Yes* No ?

BT- 7. Do you prefer traveling with someone who will make all the necessary arrangements to the adventure of traveling alone? Yes *No* ?

BT- 8. Would you dislike any work which might take you into isolation for a few years, such as forest ranging, etc.? Yes *No* ?

BT- 9. Have books been more entertaining to you than companions? *Yes* No ?

BT-10. Do you want someone to be with you when you receive bad news? Yes *No* ?

BT-11. Do you usually prefer to do your own planning alone rather than with others? *Yes* No ?

BT-12. Do you often feel lonesome when you are with other people? *Yes* No ?

BT-13. Do you usually enjoy spending an evening alone? *Yes* No ?

BT

BT-14. Do you often find that you cannot make up your mind until the time for action has passed? [✓ Yes] No ?

BT-15. Do you especially like to have attention from acquaintances when you are ill? Yes [✓ No] ?

BT-16. When you are in low spirits do you try to find someone to cheer you up? Yes [✓ No] ?

BT-17. Does your ambition need occasional stimulation through contact with successful people? Yes [✓ No] ?

BT-18. Do you find that people are more stimulating to you than anything else? Yes [✓ No] ?

BT-19. Do you tend to be radical in your political, religious, or social beliefs? [✓ Yes] No ?

BT-20. Do you prefer to be alone at times of emotional stress? [✓ Yes] No ?

BT-21. Do you usually prefer to work with others? Yes [✓ No] ?

BT-22. Do you get as many ideas at the time of reading a book as you do from a discussion of it afterward? [✓ Yes] No ?

BT-23. Do you prefer making hurried decisions alone? [✓ Yes] No ?

BT-24. Are you considered to be critical of other people? [✓ Yes] No ?

BT-25. Do you like to be with people a great deal? Yes [✓ No] ?

BT

LOADINGS ON OBLIQUE FACTORS

I. Intellectual Independence. Some resemblance to Mosier's "Autistic Tendency"; see items 1 and 12.

II. Gregariousness. Not related to Guilford's S. Does not imply social skill. Resembles Layman's second factor.

III. Liking for prolonged speculative consideration of problems or social inhibition. Resembles Guilford's GD.

IV. Need for the sympathy and affection of family or close friends.

V. Intellectual Leadership. Resembles Guilford's factor having this name.

No.	Identifications: Variable	Au I	Gs -II	SJ[1] -III	Ss IV	Ip V	h^2
BT- 1.	Q:Day-dreams	52	-34	--	--	--	35
BT- 2.	Q:Intellectual interest	--	--	--	--	47	28
BT- 3.	Q:Slow decisions	--	-32	-53	--	--	42
BT- 4.	Q:Absorbed in work	--	-50	-35	33	--	41
BT- 5.	Q:Studies motives	--	--	-35	27	40	26
BT- 6.	Q:Heckles a speaker	--	--	--	-30	--	18
BT- 7.	Q:Likes travel alone	--	--	--	--	34	18
BT- 8.	Q:Likes isolation	--	--	--	36	--	22
BT- 9.	Q:Likes books	55	-52	--	--	--	55
BT-10.	Q:Bad news alone	--	--	--	43	52	42
BT-11.	Q:Plans alone	32	-32	--	30	--	32
BT-12.	Q:Lonesome with others	48	-44	--	--	--	37
BT-13.	Q:Likes evening alone	--	-34	--	--	36	37
BT-14.	Q:Can't make up mind	26	--	-55	--	--	41
BT-15.	Q:Likes alone when ill	--	--	--	30	29	28
BT-16.	Q:Likes alone when depressed	--	--	--	--	38	26
BT-17.	Q:Needs no stimulation	--	--	--	--	25	17
BT-18.	Q:People are not stimulating	--	-59	--	27	--	48
BT-19.	Q:Radical beliefs	31	--	--	--	29	19
BT-20.	Q:Likes alone in stress	--	--	--	53	32	42
BT-21.	Q:Likes work alone	--	-71	--	--	--	71
BT-22.	Q:Ideas from reading	42	--	--	--	--	23
BT-23.	Q:Likes decisions alone	32	--	--	--	37	31
BT-24.	Q:Critical of people	38	--	--	-25	--	32
BT-25.	Q:Likes to be alone	--	-90	--	--	--	94

---

[1] Speed of Judgment, See Psychometric Monograph No. 5.

ANALYSIS CaA

Cattell, R. B. The description of personality: principles and findings in a factor analysis. Amer. J. Psychol., 1945, 58, 69-90.

The subjects were 208 adult men, soldiers in ASTP programs, business and professional groups, mean age 30.2 years. Ratings were made by different judges for each group of 16 men, 2 judges for each group. Correlations were averaged for the 13 different groups via the Z-function.

Judges were used to select 171 representative trait names from a much larger list of personality characteristics found in the dictionary. To boil down the number of variables further 100 adult subjects were rated dichotomously on the 171 traits. For the factor analysis the 35 traits were selected that represented nuclei of other clusters or were confirmed by other researches as clusters.

The title of each cluster is sometimes distinctly wider in reference than the three actual traits listed would seem to justify (notably in clusters 5, 14, 15, 21, 33); there are usually at least six traits in the cluster. The aim has been to represent as accurately as possible, by the title and traits in combination, the general character of the cluster. Occasionally, where the three highest traits would give a misleading impression in this respect, slightly lower but less overlapping traits on the cluster correlation list are given.

CaA- 1.	Self Assertive	VS	Self Submissive
	Boastful		Modest
	Assertive		Submissive
	Conceited		Self critical, dissatisfied
CaA- 2.	Intelligent, analytical	VS	Unimaginative, stupid
	Intelligent		Stupid
	Clear thinking		Incoherent, confused
	Clever		
CaA- 3.	Wise, mature, polished	VS	Dependent, silly, incoherent
	Independent		Emotionally dependent
	Reliable		Undependable
	Mature		Emotionally immature, irresponsible
CaA- 4.	Changeable, frivolous	VS	Thoughtful, stoic, reserved
	Unreflective		Thoughtful
	Impulsive		Deliberate
	Profligate		Austere
CaA- 5.	Neurotic	VS	Not generally neurotic
	Self deceiving		Realistic
	Hypochondriacal		
	Nervous, specific neurotic symptoms		

CaA

CaA- 6.	Hard, cynical	VS	Kindly, gentle, idealistic
	Thankless		Grateful
	Hostile		Friendly, understanding
	Hardhearted		Softhearted
CaA- 7.	Wilful, egotistic, predatory	VS	Mild, self-effacing, tolerant
	Extra-punitive (blaming mistakes on others)		
	Headstrong		Gentle tempered
	Exhibitionist		Self-effacing
CaA- 8.	Rigid, tyrannical, vindictive	VS	Adaptable, friendly
	Extra-punitive		
	Inflexible (emotionally)		Adaptable (to change)
	Hostile		Friendly
CaA- 9.	Surly, hard	VS	Good-natured, easy-going
	Thankless		Grateful
	Hardhearted, embittered		Softhearted
	Short-tempered		Easy-going
CaA-10.	Demoralized, autistic	VS	Realistic, facing life
	Unrealistic		Realistic, practical
	Quitting		Persevering
	Subjective, evasive		Facing life
CaA-11.	Strong-willed, conscientious	VS	Indolent, incoherent, impulsive
	Persevering		Quitting
	Painstaking		Slipshod
	Conscientious		Conscienceless
CaA-12.	Intellectual	VS	Simple, undisciplined mind
	Thoughtful		Unreflective
	Analytical		
	Wide interests		Narrow interests
CaA-13.	Insecure, infantile, hostile	VS	Mature, kind, tactful
	Easily jealous		
	Thankless, unappreciative		Grateful
	Self-pitying		
CaA-14.	Anti-social, schizoid	VS	Out-going, idealistic, cooperative
	Cynical		Idealistic
	Obstructive		Cooperative
	Timid, withdrawn		Adventurous

CaA-15.	Cheerful, enthusiastic, witty	VS	Unhappy, frustrated, dour
	Genial		Coldhearted
	Optimistic		Pessimistic
	Enthusiastic		Apathetic
CaA-16.	Active, neurotic, creatively unstable	VS	Self-controlled, rigid, conventional
	Intrusive		Reserved
	Impulsive		Deliberate
	Neurotic		
CaA-17.	Character neurosis, psychopathic	VS	Emotionally mature
	(Neurotic, irritable, uncontrolled)		Balanced
	Fickle		Loyal
	Dishonest		Honest
CaA-18.	High-strung, expressive, driven	VS	Phlegmatic
	Highly strung		(Unexcited and unexcitable)
	Hurried		Lethargic
	Vivacious		Lethargic
CaA-19.	Spiteful, tight-fisted, superstitious	VS	Natural, friendly, open
	Hostile		Friendly
	Obstructive		Cooperative
	Secretive		Frank
	(Irrational, obsessive fears)		
CaA-20.	General emotionality (with maladjustment)	VS	Unemotional
	Emotional (in all ways)		Unemotional
	Dissatisfied		Content
	Excitable		Phlegmatic
CaA-21.	Ascendant, expressive, widely interested	VS	Retiring, quiet, narrow
	Energetic, spirited		Languid
	Self-confident		Self-distrustful
	Debonnaire		
CaA-22.	Responsive, genial, sentimental	VS	Aloof, cold, misanthropic
	Responsive		Aloof
	Genial		Coldhearted
	Social interests		Brooding (not an opposite)

CaA

CaA-23.	Facile, foppish, affected	VS	Inarticulate, natural
	Exhibitionist		Self-effacing
	Eloquent		Inarticulate
	Flattering		Natural (not an opposite)
CaA-24.	Hostile, paranoid	VS	Trustful, good-tempered
	Sadistic		Not sadistic
	Suspicious		Trustful
	Mulish		Reasonable
CaA-25.	Esthetic interests, independent mind		
	General aesthetic interests		
	Musical ability and interests		
	Independent		
CaA-26.	Restlessly, sthenically, hypomanically emotional	VS	Calm, self-effacing, patient
	Emotional		Unemotional
	Excitable		Phlegmatic
	Impatient		Patient
	(Sthenically emotional-- Burt)		
CaA-27.	Infantile, demanding, self-centered	VS	Emotionally mature, adjusting to frustration
	Infantile		Mature emotionally
	Self-pitying		
	Exhibitionist		Self-effacing
CaA-28.	Changeable, characterless, unrealistic	VS	Stable, integrated character
	Changeable		Stable emotionally
	______________		Self-respecting
	Unself-controlled		Self-controlled
CaA-29.	Psychophysically vigorous, alert	VS	Neurasthenic
	Alert		Absent-minded
	Energetic, spirited		Languid
	Quick		Slow
CaA-30.	Adventurous, lusty	VS	Generally inhibited, timid
	Incontinent		Inhibited
	Gluttonous		Queasy
	Curious		Unenquiring
CaA-31.	Sociable, hearty	VS	Seclusive, shy
	Sociable (forward, gregarious)		Shy (and seclusive)
	Responsive		Aloof
	Hearty		Quiet

CaA-32.	___	VS	Melancholic (agitated/involutional)
	___		Hypochondriacal
	Optimistic		Pessimistic
	Placid		Worrying
CaA-33.	Tough, solid, talkative	VS	Introspective, sensitive, scared
	___		Introspective
	Tough		Sensitive
	Lethargic		Hurried
CaA-34.	Imaginative, introspective, constructive	VS	Set, smug, thrifty
	Labile		Habit-bound
	Intuitive		Logical (precise)
	Careless of material things		Thrifty
CaA-35.	Smart, assertive	VS	Simple-hearted, meek
	Sophisticated		Simple
	Intelligent		Stupid
	Assertive		Submissive

CaA

LOADINGS* ON OBLIQUE FACTORS

A. Cyclothyme-v-Paranoid Schizothyme
B. General Mental Capacity (Spearman's 'g', in personality expression)
C. Emotionally Mature, Stable Character-v-General Emotionality
D. Hypomanic, Sthenic Emotionality-v-Phlegmatic Frustration-Tolerance
E. Dominance-v-Submissiveness
F. Surgency-v-Melancholy, Shy, Desurgency
G. Positive Character Integration-v-Immature, Dependent Character
H. Charitable, Adventurous Surgency-v-Inhibited, Insecure Desurgency
I. Sensitive, Imaginative, Neurotic Emotionality-v-Rigid, Tough Poise
J. Neurasthenic-v-Vigorous "Obsessional" Character
K. Trained, Cultured Mind-v-Boorishness
L. Rhathymic, Adjusted Surgency-v-Schizoid Desurgency

	Identifications:	A	G	E	Ei	Do	Su	Pe	So	Se	?	Cu?	?	
No.	Variable	A	B	-C	D	E	F	G	H	I	J	K	L	h^2
CaA- 1.	R:Self Assertive	-33	--	--	24	39	--	--	--	--	--	--	--	75
CaA- 2.	R:Intelligent	--	52	--	--	--	--	25	--	--	-22	--	--	68
CaA- 3.	R:Wise, mature	--	41	--	--	--	--	35	--	-26	-25	--	--	80
CaA- 4.	R:Changeable	--	-43	36	--	--	--	-27	--	--	--	--	--	63
CaA- 5.	R:Neurotic	-27	--	32	26	--	--	--	--	27	--	--	--	51
CaA- 6.	R:Hard, cynical	-33	--	--	--	--	-29	--	-32	-38	--	--	-16	72
CaA- 7.	R:Wilful,egotistic	-31	--	--	--	35	--	--	--	--	--	--	--	76
CaA- 8.	R:Rigid, tyrannical	-46	--	--	--	29	--	--	--	--	--	--	-16	68
CaA- 9.	R:Surly, hard	-51	--	--	--	28	--	--	--	--	--	--	19	66
CaA-10.	R:Demoralized	--	-39	42	--	--	--	-31	--	--	20	--	--	53
CaA-11.	R:Strong-willed	--	47	--	--	--	--	33	--	--	-26	23	--	63
CaA-12.	R:Intellectual	--	41	--	--	--	--	--	--	--	--	30	--	66
CaA-13.	R:Insecure	-31	--	--	--	--	--	--	--	--	--	--	--	53
CaA-14.	R:Anti-social	-59	--	--	--	--	--	--	-32	--	--	-18	-18	78
CaA-15.	R:Cheerful	44	--	--	--	--	37	--	--	--	--	--	22	78
CaA-16.	R:Active	--	--	36	--	--	--	--	--	--	--	--	--	77
CaA-17.	R:Character neurosis	--	-31	38	--	--	--	-29	--	--	--	--	--	74
CaA-18.	R:High-strung	--	--	31	--	--	--	--	--	--	--	--	--	63
CaA-19.	R:Spiteful	-49	--	--	--	--	-27	--	-31	--	--	--	--	79
CaA-20.	R:Gen. emotionality	--	--	36	--	--	--	--	--	25	--	--	--	69
CaA-21.	R:Ascendant	--	--	--	--	--	--	--	23	--	-18	--	--	72
CaA-22.	R:Responsive	-34	--	--	--	--	30	--	27	--	--	--	16	61
CaA-23.	R:Facile	--	--	--	--	--	--	--	--	--	--	--	--	61
CaA-24.	R:Hostile	-41	--	--	--	25	-29	--	-24	--	--	--	-16	59
CaA-25.	R:Esthetic interests	--	27	28	--	-25	--	--	--	--	--	18	--	47
CaA-26.	R:Emotional	--	--	38	41	--	--	--	--	--	--	--	--	65
CaA-27.	R:Infantile	--	--	37	50	--	--	-27	--	28	--	--	--	77
CaA-28.	R:Changeable	--	-42	38	34	--	--	-27	--	--	--	--	--	71
CaA-29.	R:Vigorous	--	38	--	--	--	--	--	--	--	-23	--	--	65
CaA-30.	R:Adventurous	--	--	--	--	--	--	--	24	--	-19	--	--	86
CaA-31.	R:Sociable	--	--	--	--	--	32	--	--	--	--	--	--	62
CaA-32.	R:Not melancholic	27	--	-28	--	--	34	--	--	--	--	--	--	52
CaA-33.	R:Tough	--	--	-28	--	31	31	--	--	--	--	-17	--	54
CaA-34.	R:Imaginative	--	--	--	--	--	28	--	--	29	--	--	--	42
CaA-35.	R:Smart	--	31	--	--	34	--	--	--	--	-24	22	--	63

*The loadings below .25 that were listed by Cattell for interpretation are given.

CaA

INTERCORRELATIONS OF THE FACTORS

	A	B	C	D	E	F	G	H	I	J	K	L
A		-06	-14	14	-24	-05	10	11	-15	07	-32	18
B	-06		32	32	20	-02	32	22	36	-20	00	28
C	-14	32		18	39	13	43	09	-14	-04	-09	13
D	14	32	18		12	-37	16	41	-06	-12	02	-16
E	-24	20	39	12		22	26	-30	06	-30	-24	06
F	-05	-02	13	-37	22		00	-17	39	32	-33	21
G	10	32	43	16	26	00		-22	-01	-24	20	-14
H	11	22	09	41	-30	-17	-22		16	-22	18	-02
I	-15	36	-14	-06	06	39	-01	16		-16	01	15
J	07	-20	-04	-12	-30	32	-24	-22	-16		-21	35
K	-32	00	-09	02	-24	-33	20	18	01	-21		15
L	18	28	13	-16	06	21	-14	-02	15	35	15	

ANALYSIS CaB

Cattell, R. B. Confirmation and clarification of primary personality factors. *Psychometrika*, 1947, *12*, 197-220.

This study was one of three devoted to confirming factors previously found in behavior rating data, questionnaire data, and objective test data and to determining the relationships among the factors in these three fields, to test the hypothesis that they are actually the *same* factors outcropping in different media. This analysis concerns behavior rating data only. The subjects were 133 men among 373 university students (including veterans). Analysis CaC uses the same items, but women subjects. Thirteen factors were extracted of which 2 were found to be residual factors after rotation. Oblique rotation was used without knowledge of the variable names.

The behavior ratings were carried out by groups of 17 who knew each other well and who rated each other. They rated all ratees at one time with respect to a given trait. The instructions were to divide the group in the proportions of approximately 2, 1, and 1 for average, high and low on the trait, respectively. The highest subject and the lowest subject were also noted. This produced a 5-point scale distributed approximately normally.

Included in the study were 2 variables that were previously found to have high loadings on each factor in a previous study plus at least one other variable intended to measure each factor as purely as possible. The "definitions" upon which the ratings were based consisted of a trait name, sometimes with one or two parallel names, and a description up to 50 words in length representing both ends of the trait continuum being defined. Below are the trait names for the two ends of each continuum with the full definitions included for the first two variables only.

CaB- 1.	Readiness to cooperate Generally tends to say yes when invited to cooperate. Outgoing. Ready to meet people at least halfway. Finds ways of cooperating despite difficulties.	vs	Obstructiveness Inclined to raise objections to a project, cynical or realistic. "Cannot be done." Uninterested or unfavorable attitude to joining in. Inclined to be "difficult."
CaB- 2.	Emotionally Stable Can be depended upon to look at questions objectively, without emotional prejudice, and in the same constant light from day to day. Above emotion in his judgments. Dependable and realistic.	vs	Changeable Sees things in terms of the emotion of the moment. Emotional bias changes from day to day and place to place. Does not remain the same person from day to day. Undependable.
CaB- 3.	Attention-getting	vs	Self-sufficient
CaB- 4.	Assertive, Self-assured	vs	Submissive
CaB- 5.	Depressed, Solemn	vs	Cheerful
CaB- 6.	Frivolous	vs	Responsible

CaB

CaB- 7.	Attentive to People	vs	Cool, Aloof
CaB- 8.	Easily Upset	vs	Unshakable Poise, Tough
CaB- 9.	Languid, Slow	vs	Energetic, Alert
CaB-10.	Boorish	vs	Intellectual, Cultured
CaB-11.	Suspicious	vs	Trustful
CaB-12.	Good-natured, Easygoing	vs	Spiteful, Grasping, Critical
CaB-13.	Calm, Phlegmatic	vs	Emotional
CaB-14.	Hypochondriacal	vs	Not so
CaB-15.	Mild, Self-effacing	vs	Self-willed, Egotistic
CaB-16.	Silent, Introspective	vs	Talkative
CaB-17.	Persevering, Determined	vs	Quitting, Fickle
CaB-18.	Cautious, Retiring, Timid	vs	Adventurous, Bold
CaB-19.	Hard, Stern	vs	Kindly, Soft-hearted
CaB-20.	Insistently Orderly	vs	Relaxed, Indolent
CaB-21.	Polished	vs	Clumsy, Awkward
CaB-22.	Prone to Jealousy	vs	Not Prone to Jealousy
CaB-23.	Rigid	vs	Adaptable
CaB-24.	Demanding, Impatient	vs	Emotionally Mature
CaB-25.	Unconventional, Eccentric	vs	Conventional
CaB-26.	Placid	vs.	Worrying, Anxious
CaB-27.	Conscientious	vs	Somewhat Unscrupulous
CaB-28.	Composed	vs	Shy, Bashful
CaB-29.	Sensitively Imaginative	vs	Practical, Logical
CaB-30.	Neurotic Fatigue	vs	Absence of Neurotic Fatigue
CaB-31.	Esthetically Fastidious	vs	Lacking Artistic Feeling
CaB-32.	Marked Interest in Opposite Sex	vs	Slight Interest in Opposite Sex
CaB-33.	Frank, Expressive	vs	Secretive, Reserved

CaB

CaB-34.	Gregarious, Sociable	vs	Self-contained
CaB-35.	Dependent, Immature	vs	Independent-minded
CaB-36.	Intelligence	vs	Deficiency of Intelligence

This was the A.C.E. Psychological Examination.

CaB

LOADINGS ON OBLIQUE FACTORS

1. E, Dominance VS Submissiveness
2. G, Positive Character Integration VS Immature, Dependent Character
3. H, Charitable, Adventurous Cyclothymia VS Withdrawn, Heboid Schizothymia
4. F, Surgency VS Desurgency
5. A, Cyclothymia VS Schizothymia
6. K, Trained, Socialized, Cultured Mind VS Boorishness
7. B, Intelligence (in Total Personality) VS Mental Defect
8. I, Sensitive, Imaginative Emotionality VS Rigid, Mature Poise
9. J', Thoughtful Neurasthenia VS Vigorous, Simple Character
10. M, Spiessburger Concernedness VS Bohemian Intellectualism
11, L, Paranoid Schizothymia VS Sensitive, Trustful Accessibility

No.	Identifications: Variable	Do? 1	Pe 2	So? -3	Su 4	A 5	Cu -6	G 7	?[1] 8	? 9	Cv 10	? 11	h^2	R^2
CaB- 1.	R:Cooperates	--	--	--	--	49	--	--	--	-47	--	--	90	58
CaB- 2.	R:Stable	25	44	--	--	--	--	--	--	--	--	--	83	64
CaB- 3.	R:Attention-getting	--	--	--	--	--	--	--	29	--	--	--	86	--
CaB- 4.	R:Assertive	58	--	--	--	--	--	--	--	--	--	--	85	69
CaB- 5.	R:Depressed	33	--	--	-47	--	--	--	--	--	--	--	72	--
CaB- 6.	R:Frivolous	--	-39	31	--	--	--	--	30	--	--	--	87	--
CaB- 7.	R:Attentive	--	29	--	--	33	--	--	--	--	--	--	66	--
CaB- 8.	R:Easily upset	--	--	--	--	--	-27	--	--	--	--	--	72	54
CaB- 9.	R:Languid	--	--	--	-59	--	--	--	--	--	--	--	87	53
CaB-10.	R:Boorish	--	-32	--	-26	--	-39	--	--	--	--	--	79	--
CaB-11.	R:Suspicious	--	--	--	--	--	--	--	--	--	--	--	63	--
CaB-12.	R:Good-natured	--	25	--	--	34	--	--	--	--	--	--	71	50
CaB-13.	R:Calm	--	--	--	-39	26	--	--	--	-35	--	--	82	--
CaB-14.	R:Hypochondriacal	-26	--	--	--	--	--	--	--	--	--	--	49	--
CaB-15.	R:Self-effacing	--	28	--	-28	34	--	--	--	--	--	--	77	--
CaB-16.	R:Silent	--	--	--	-33	--	--	--	--	--	--	--	84	--
CaB-17.	R:Persevering	31	55	--	--	--	--	--	--	--	--	--	73	68
CaB-18.	R:Cautious	--	--	-33	-34	--	--	--	--	--	--	--	78	--
CaB-19.	R:Hard	39	--	--	--	--	--	--	--	--	--	--	67	--
CaB-20.	R:Orderly	--	28	--	--	--	--	45	--	--	--	--	70	--
CaB-21.	R:Polished	--	--	--	--	--	32	--	--	--	--	--	66	--
CaB-22.	R:Jealous	--	--	--	--	--	--	--	--	--	--	37	79	--
CaB-23.	R:Rigid	--	--	--	--	-29	--	--	--	--	--	--	70	--
CaB-24.	R:Demanding	--	-37	--	--	-35	--	--	36	--	--	--	91	--
CaB-25.	R:Unconventional	--	--	--	--	--	--	--	--	--	-32	--	57	--
CaB-26.	R:Placid	35	--	--	--	31	--	--	--	--	-25	26	63	60
CaB-27.	R:Conscientious	--	--	-48	--	--	-27	26	--	--	--	--	88	60
CaB-28.	R:Composed	--	--	40	--	--	35	--	--	--	--	--	77	74
CaB-29.	R:Imaginative	-25	--	--	--	--	28	--	28	--	-32	--	50	52
CaB-30.	R:Neurotic fatigue	--	--	--	--	--	--	--	--	--	--	--	58	51
CaB-31.	R:Esthetic	--	--	--	--	--	--	--	35	--	--	--	48	--
CaB-32.	R:Sex interest	--	--	51	--	--	--	--	--	--	--	--	55	--
CaB-33.	R:Frank	51	25	25	--	--	--	--	--	--	--	--	74	--
CaB-34.	R:Gregarious	--	--	54	--	--	--	--	--	--	--	--	84	--
CaB-35.	R:Dependent	-45	-27	--	--	--	--	--	36	--	--	--	82	--
CaB-36.	R:Intelligence	--	--	--	--	--	--	53	29	--	--	26	49	--

[1] Possibly a combination of Se and Ei.

[2] "A representative set of reliability coefficients obtained by correlating the pool of the first 8 with that of the second 8 raters, and correcting by the Spearman-Brown formula to the full 16 raters."

CaB

DIRECTION COSINES AMONG THE FACTORS

	1	2	3	4	5	6	7	8	9	10	11
1		33	-02	-15	15	08	-12	-30	05	06	08
2	33		02	02	08	13	40	-19	45	-17	20
3	-02	02		40	07	33	-07	-07	-19	-30	30
4	-15	02	40		-07	06	08	-42	25	-40	46
5	15	08	07	-07		54	-03	-26	-47	11	53
6	08	13	33	06	54		-29	-04	-19	02	26
7	-12	40	-07	08	-03	-29		24	-01	-09	48
8	-30	-19	-07	-42	-26	-04	24		-23	-41	-44
9	05	45	-19	25	-47	-19	-01	-23		-17	04
10	06	-17	-30	-40	11	02	-09	-41	-17		-12
11	08	20	30	46	53	26	48	-44	04	-12	

ANALYSIS CaC

Cattell, R. B. The primary personality factors in women compared with those in men. Brit. J. Psychol. Stat. Sec., 1947, 1, 114-130.

The subjects were 240 undergraduate women at the University of Illinois, living in sororities and independent houses averaging about 20.7 years of age. Since this was the same experiment as Analysis CaB except that the data for the men were used there and the data for the women are used here, both details concerning the collection of data and the description of the variables may be found under Analysis CaB.

LOADINGS ON OBLIQUE FACTORS

1. C, Emotionally Mature Stable Character vs. Neurotic General Emotionality
2. A, Cyclothymia vs. Schizothymia
3. G, Positive Character Integration vs. Immature, Dependent Character
4. E', Dominance vs. Submissiveness
5. F, Surgency vs. Desurgency
6. K, Trained, Socialized, Cultured Mind vs. Boorishness
7. H, Adventurous Cyclothymia vs. Withdrawn Schizothymia
8. N, Genteel Sophistication vs. Rough Simplicity
9. B, Intelligence (in Total Personality) vs. Mental Defect
10. M, Spiessburger Concernedness vs. Bohemianism
11. D, Infantile, Sthenic Emotionality vs. Phlegmatic Frustration Tolerance

Identifications:		E	A	Pe	?	Su	Cu	So?	Sf	G	Cv.	Ei	
No.	Variable	-1	2	3	4	5	6	7	8	9	10	11	h^2
CaC- 1.	R:Cooperates	--	55	45	--	--	--	--	--	--	--	--	80
CaC- 2.	R:Stable	-46	--	--	--	--	--	--	--	--	--	--	80
CaC- 3.	R:Attention-getting	--	--	--	28	--	--	--	--	--	--	28	81
CaC- 4.	R:Assertive	--	--	25	33	--	--	--	--	--	--	--	85
CaC- 5.	R:Depressed	--	--	--	--	-34	--	--	--	--	--	--	80
CaC- 6.	R:Frivolous	--	--	-48	--	--	--	--	--	--	--	--	79
CaC- 7.	R:Attentive	--	43	--	--	34	--	--	-57	--	--	--	106
CaC- 8.	R:Easily upset	49	--	--	-40	--	--	--	--	--	--	--	98
CaC- 9.	R:Languid	--	--	--	--	-40	-25	--	--	--	--	--	81
CaC-10.	R:Boorish	--	--	--	--	--	-56	--	--	--	--	--	85
CaC-11.	R:Suspicious	37	-43	--	--	--	--	--	--	--	--	--	86
CaC-12.	R:Good-natured	--	50	--	--	--	--	--	--	--	--	--	80
CaC-13.	R:Calm	-56	--	--	--	--	--	--	--	--	--	--	78
CaC-14.	R:Hypochondriacal	52	--	--	40	--	--	--	--	--	--	--	65
CaC-15.	R:Self-effacing	--	42	--	--	--	--	--	--	--	--	--	88
CaC-16.	R:Silent	--	--	--	--	-44	--	--	--	--	--	--	90
CaC-17.	R:Persevering	--	25	57	--	--	--	--	--	26	--	--	81
CaC-18.	R:Cautious	--	--	--	--	-33	--	--	--	--	--	--	92
CaC-19.	R:Hard	-29	-46	--	--	--	--	--	--	--	--	--	90
CaC-20.	R:Orderly	--	--	47	--	--	--	--	--	--	--	--	73
CaC-21.	R:Polished	--	--	--	--	-25	57	--	78	--	--	-26	120
CaC-22.	R:Jealous	--	-26	--	--	--	--	--	--	--	--	27	74
CaC-23.	R:Rigid	--	--	--	--	--	--	--	--	--	--	--	69
CaC-24.	R:Demanding	--	-25	--	--	--	--	--	--	--	--	30	80
CaC-25.	R:Unconventional	--	--	--	25	--	--	--	--	--	-37	--	61

CaC

No.	Identifications: Variable	E 1	A 2	Pe 3	? 4	Su 5	Cu 6	So? 7	Sf 8	G 9	Cv 10	Ei 11	h^2
CaC-26.	R:Placid	-65	--	--	--	--	--	--	--	--	--	--	73
CaC-27.	R:Conscientious	--	--	--	--	--	--	--	--	--	--	--	87
CaC-28.	R:Composed	--	--	--	40	--	--	30	--	--	--	--	86
CaC-29.	R:Imaginative	40	36	--	--	--	32	--	--	--	-27	--	51
CaC-30.	R:Neurotic fatigue	62	--	--	30	--	--	--	--	--	--	--	66
CaC-31.	R:Esthetic	--	--	--	--	--	41	34	42	--	-31	--	59
CaC-32.	R:Sex interest	--	--	--	--	--	--	40	--	--	--	--	57
CaC-33.	R:Frank	--	--	--	--	40	--	--	--	--	--	--	68
CaC-34.	R:Gregarious	--	--	--	--	42	--	34	--	--	--	--	81
CaC-35.	R:Dependent	--	--	--	--	--	-38	--	--	--	--	--	79
CaC-36.	R:Intelligence	--	--	--	--	--	--	--	--	60	--	--	53

INTERCORRELATIONS OF FACTORS

	1	2	3	4	5	6	7	8	9	10	11
1		-17	15	-09	-04	-29	36	04	-16	03	21
2	-17		43	37	-30	-11	-03	-03	18	-24	37
3	15	43		32	-01	-52	19	12	09	-02	17
4	-09	37	32		-41	-42	12	-22	18	13	-13
5	-04	-30	-01	-41		11	24	-11	36	-29	-39
6	-29	-11	-52	-42	11		-04	24	-04	-27	03
7	36	-03	19	12	24	-04		14	23	-18	-10
8	04	-03	12	-22	-11	24	14		-03	-30	-14
9	-16	18	09	18	36	-04	23	-03		01	-46
10	03	-24	-02	13	-29	-27	-18	-30	01		-17
11	21	37	17	-13	-39	03	-10	-14	-46	-17	

Analysis CaD

Cattell, R. B. Primary personality factors in the realm of objective tests. J. Personality, 1948, 16, 459-487.

The tests were given to 130 men and 240 women college students, who were paid to attend the testing, but who were also motivated by interest in their own personality testing results. About one third of the tests were individual tests carried out in 3 1 1/2-hour sessions per person; the group testing was done in 5 sessions of 2 hours each. All test scores were rescaled to a 12-point range and intercorrelated by the product-moment r. Most r's are small, presumably because (1) the tests were chosen to represent the whole range of the personality sphere and are thus mostly remote from one another, and (2) the tests, being intended to be exploratory, are uniformly brief and of relatively low reliability. Factorization was by Thurstone's grouping method for 10 factors, the last 2 by the centroid method.

The construction of the test variables was intended to: (1) create objective tests directed to the essence of the factors previously found in studies of behavior ratings as indicated by their psychological meaning and by clinical-type observations of the individuals outstandingly high or low in factor endowment. (2) To establish contact with all sufficiently confirmed factors previously found in the field of objective personality tests. (3) As in the previous rating studies the necessity remained to represent the personality sphere as evenly as possible, although here our attempt to do so must be relatively blind. (4) To use brief tests. The tests were given in the order shown by the numbers in parentheses.

Tests used as landmarks of previously discovered factors:

CaD- 1. (11) Intelligence (Factor I). ACE Psychological Examination, College level.

CaD- 2. (2) Perseveration or Disposition Rigidity (Factor XXXII). 12 minutes of "creative effort" type tests; 5 motor and 2 perceptual tests.

CaD- 3. (1) Fluency of Association (Factor XXVII). A combination of the fluency factors found by other investigators is here measured by 10 subtests, 8 of them old tests (ink-blots, pictures, drawings, various story-completion and verbal tests) and 2 new exploratory tests. Total time: 19 minutes.

CaD- 4. (4) Slowness of Reaction Time (Factor XXIVa). This was measured by 40 auditory and 40 visual reaction times, half with regular, half with irregular interval after the warning signal. The score is the average of 80.

CaD- 5. (3) Speed of Judgment (Factor XXIa). The subject was presented with 40 statements consisting of generalizations about personality and social behavior and was asked to mark them essentially true or incorrect. The score is the number of items marked in 4 minutes.

CaD- 6. (6) Mechanical, Ideomotor, or Psychomotor Speed (Factor XXIa). 5 minutes on speed of writing and reading and 4 on speed of cancellation of letters and numbers.

CaD- 7. (7) Perceptual Speed (Factor XXIb). Thurstone's perceptual closure factor represented by incomplete words (1 1/2 min.) and incomplete drawings (1 1/2 min.).

CaD- 8. (10) Time of Dark Adaptation (Factor XXIb). Since Thurstone's perceptual closure factor had a loading on dark adaptation time, this variable was included. Standard glare was followed by measurement of the time to perceive faintly illuminated letters.

CaD- 9. (13) Oscillation (Factor XXa). This was measured by differences in consecutive 7-second periods of performance (cumulatively added) for adding, coding and letter canceling, 63 seconds of each.

CaD-10. (31) Fluctuation of Attitudes (Cluster XXa). The subject checked 50 attitudes on personal and social matters on the first day of testing and rechecked them 6 weeks later. The score was on changes, regardless of direction.

CaD-11. (12) Honesty-Integrity (Factor XII) 1. Overstatement. This was the usual statement of books read, checked later against questions involving recognition of the chief characters or subject matter. Equal weight was given to a second section in which nonexistent books could be checked as read. 5 1/2 minutes of testing and 5 of retesting.

CaD-12. (20) Honesty-Integrity (Factor XII) 2. Cheating. The usual dotting test with closed eyes, scored for items that could not be attained without vision. Given as a "co-ordination test." Two runs of 10 seconds each.

CaD-13. (16) Honesty-Integrity (Factor XII) 3. Cursive Miniature Situation Test. A C.M.S. test is one where behavior is observed in an experimental situation made to resemble situations in real life; the experimental situation is made to move and change, requiring adaptations from the subject to an unfolding situation. This one involved crossing various types of lines under certain conditions. In this case the situations were changed by having the subjects turn pages on a signal. The score was the number of "slanting lines crossed," which represented a way in which the subject could increase his score illegally.

CaD-14. (35) Active-Reliable Will (Factor XIII) vs. Suggestibility to Authority. The test presented 24 opinions on which the subject indicated his reaction. Later, authorities were quoted against him and the shift toward authority was measured. (Compare variable 48.)

CaD-15. (45) Determined Will, Endurance (Factor XIV). This was the combined score on (1) intensity of electric shock reached before the subject demanded cessation, and (2) time in holding up a leg.

CaD-16. (28) Dynamic Momentum (Factor XVI). This involved the length of time a person continues with a task not clearly soluble. In this test the subject could spend either much time on a few items or a little on many. Two tests were combined: (1) anagrams: words found per item, (2) mathematical puzzles with several solutions: solutions per puzzle. Time was such that all items could not be attempted.

CaD-17. (21) Mental Initiative (Factor XVII), Absence of Questionable Preferences in Reading. This is a reading preference test designed in terms of book titles that would appeal to a mature personality versus those of a sensational type. Scored for good, "unquestionable," preferences.

CaD-18. (9) Tempo (The "Verbal Speed" of Allport and Vernon)(Cluster XXIc). The score here is a combination of two tests: the speed of sorting cards with no instructions to hurry and the natural speed of talking.

CaD-19. (8) Thurstone's Perceptual Factor D (Factor XXb), Alternating Perspective. Speed of uncontrolled alternations on the Necker Cube in 1 minute. See CT-5.

CaD-20. (41) Thurstone's Perceptual Factor E (Factor IVc), Two-hand Co-ordination. This was the score on the two-hand co-ordination apparatus, made and administered as described by Thurstone (high score represents good perception and control). See CW-12.

Newly invented tests to measure personality factors:

Factor A, Cyclothymia - Schizothymia has no expected loadings in the above, except perhaps in reaction time and attitude fluctuation.

CaD-21. (14) Number of Jokes Considered Funny. The subject was asked to check a series of jokes as "good" or "poor," keeping fairly close to a 50/50 use of these terms. The score is the ratio good to poor.

CaD-22. (5) Ratio of Regularly Warned to Irregularly Warned Reaction Time. This score was the ratio of reaction time with signal regularly two seconds before, to time with a signal varying irregularly from a 1- to a 6-second fore-period. 40 reactions, half in an auditory, half in a visual series, were given under each category.

CaD-23. (39) Color-Form Ratio in Sorting. This was the same as Thurstone's test. The subject is asked to sort cards into labeled boxes without further instruction. The score is the ratio of cards sorted correctly by color to the number sorted correctly by form, where these classifications conflict.

Factor B, General Ability in Personality, is already adequately represented by the intelligence test and probably by Information, Fluency, and others.

Factor C, Emotional Maturity and Stability vs. General Emotionality, is represented in part by variables 2, 8 (following Eysenck), 13, and perhaps 10. The following variables were added to separate C and G:

CaD-24. (25) Ratio of Recall of Emotional to Nonemotional Words. A list of short sentences, some abstract and indifferent, others naming emotional situations, was presented for 1.5 minutes, recalled by sentence completion 2 minutes later, and repeated. The index is emotional/nonemotional words recalled.

CaD-25. (27) Impairment of Mental Performance (Memorizing and Arithmetic Problem) by Unpleasant Emotion. The subject recalled learned material after the interpolation of (a) easy "riddle" problems and (b) emotional disturbance of having to write down aspects of his personality that he felt to be humiliating. The score was the excess of (a) over (b). This score was combined with a second test score in which the impairment of arithmetical performance by emotionally disturbing noise (battle record, amplified) was recorded. The former contributed more to the compounded variance.

CaD-26. (42) Body-Sway Suggestibility. Forward and backward sway of the blindfold subject was recorded in inches, positive when it agreed with the direction suggested by the experimenter (or amplified phonograph record: "You are falling forward, falling forward, etc.....").

CaD-27. (32) Departure from Fairmindedness. The subject first agreed to certain "facts" in isolation. He was then asked about these facts in contexts of his own attitudes requiring a distortion of these facts. The score was the extent to which he was prepared to distort them for immediate argument.

Factor D, Infantile, Sthenic Emotionality vs. Phlegmatic Frustration Tolerance.

CaD-28. (46) Impairment of Mirror Drawing by Emotion. The subject was timed on drawing a difficult star pattern in a mirror drawing test. After two practice runs on a simple figure the subject made 3 successive runs, on the middle one of which he was threatened with electric shock for poor performance and shocked regardless of his performance. The score was twice the middle time minus time on the first and last.

Factor E, Dominance vs. Submissiveness. Variable 14 should be negative on this factor.

CaD-29. (29) Criticalness. There were 3 pooled sub-tests: (1) Underlinings of "false," "absurd," or "stupid" in views on others' attitudes. (2) Words, pictures, and characteristics of town and nation indicated as unsatisfactory when the subject's judgment was invited. (3) Number of criticisms of the whole test procedure when asked to write comments. (2) and (3) were corrected for fluency.

CaD-30. (30) Ratio Self-to-Other Criticism. This was a rescoring of variable 29 data: the ratio of criticisms/approvals of self and ego-involved objects divided by the ratio of criticisms/approvals of things in general.

CaD-31. (18) Self-Confidence. This was estimated from 2 subtests, somewhat greater weight being given to the first: (1) S's rating of his own performance in a test where objective judgment was nearly impossible, (2) ratio of items judged good to those judged defective in another (memorizing) test.

Factor F, Surgency vs. Desurgency.

CaD-32. (33) Myokinesis. The subject was scored on mean length attained in 20 attempts to reproduce, blindfolded and with no wrist contact on the paper, a 1-inch line and 20 attempts to reproduce a 2-inch line. The 2 parts correlated .71.

CaD-33. (17) Aspiration Level. Level was taken with respect to performance on the C.M.S. test (Variable 13). The score was the average of absolute level forecast on the second and third runs of the test.

Factor G, Integrated Character vs. Dependent Character. The perseverance and conscientiousness of this factor may show itself in the endurance test, tests listed under C factor, and in the honesty-integrity variables (12 and 13).

CaD-34. (15) C.M.S. Test: Excessive Use of Circles. On the C.M.S. test (variable 13) circling a given number of lines rather than crossing them is permitted. This score represents excessive use of circles.

CaD-35. (47) Embarrassment in Mirror Drawing Tasks. To cancel out sheer dexterity, the time on an equivalent tracing of a pattern by direct view was subtracted from that on the star in the mirror. The mean of 3 successive pairs of runs was taken.

CaD-36. (38) Ratio Consonant/Dissonant Statements Recalled. The subject checked a series of opinion statements "agree" or "disagree" and, after an interpolated activity, was asked to recall without previous instruction to memorize. The score is the fraction of "agreed" opinions recalled minus the fraction of "disagreed" views recalled. This was not merely a measure of tendency to disagree, since the correlation of agree-disagree with this was only -.19. The hypothesis was that the more integrated character will recall both sides.

Factor H, Adventurous Cyclothymia vs. Withdrawn Schizothymia. Assuming this is the constitutional schizoid pattern, it will show some tests with Factor A and have others more specific.

CaD-37. (43) Magnitude of Mean P.G.R. Deflection. This was the mean percentage drop to 5 verbal stimuli, 5 noxious physical stimuli, and 2 tasks.

CaD-38. (22) Ratio Purposeful to Chance Observation and Memory. The subject was asked to read a passage and observe 3 or 4 different kinds of facts. He was questioned immediately on these facts and, soon after, on the irrelevant matter, e.g., drawings sketched around the passage. The score is the ratio of purposeful to nonpurposeful observation.

CaD-39. (24) Improvement during a Complex Task. The subject performed a task of reading and recording that required the maintenance of several mental sets. The score was the performance during the second 2 minutes divided by that during the first 2 minutes. Repeated with a different task.

CaD-40. (26) Ability to Handle Surprises. This was the score on a series of riddles which demanded intelligence as little as possible but, instead, an unusual way of looking at things and handling the unfamiliar. See CT-7.

CaD-41. (44) Frequency of P.G.R. Deflections when Stimulated. The subject looked for one minute into a dark box while frequency of spontaneous deflections was recorded. This might be expected to indicate the liveliness of imagination studied in Factor I or, more probably, the dynamic spontaneity of the H factor.

Factor I, Sensitive Emotionality vs. Rigid Mature Poise. Variables 42 and 43 are to distinguish between sensitive, unstable intuitiveness with nervous "jumpiness" and a practical, explicit, matter-of-fact logicality.

CaD-42. (36) Ability to State Logical Assumptions. The score was the sum of 2 scores ($r = .58$) derived from the Watson-Glazer test of fairmindedness and critical thinking. In one, the subject selected the essential assumptions underlying 8 statements and in the other he stated what he considered the assumptions to be (inventive) on 4 statements.

CaD-43. (40) Proneness to False Reactions in Reaction Time. In the series of 20 auditory and 20 visual reactions with regular warning were interspersed 4 false visual stimuli and 4 false auditory stimuli respectively. The score was the number of false stimuli to which S reacted.

Factor J, Thoughtful Neurasthenia vs. Vigorous, Simple Character. Variable 43 might belong; the following are mainly of "dynamic vigor." Variable 3 might also be related to this factor

CaD-44. (23) Immediate Memory Power. Several tests of memorizing occurred indirectly in these experiments. This score is a combination of score on memory for complex issues in 4 passages, deliberately memorized and immediately recalled, and memory for 2 series of short sentences, deliberately memorized and recalled after 1 minute.

CaD-45. (48) Effort Curve. It has been suggested, on clinical observation, that the neurasthenic's fatigue curve differs from normal in being concave. The subject pulled to a 2-second metronome on a finger ergograph against 3 Kg. until he could pull no more (1-2 min.). The amplitude 2/3 of the way toward total cessation was divided by initial amplitude.

CaD-46. (37) Ability to Recognize the Possibilities of Order Classification. Various kinds of material were presented to the subject, and he was asked to name as many useful categories as possible into which each could be divided for filing purposes, etc. The score was the number of categories suggested, after striking out any farfetched classifications

Factor K, Trained, Socialized, Cultured Mind vs. Boorishness.

CaD-47. (19) Total Information. This was a general information test with 23 categories of knowledge, 72 items in all; 25 minutes. This would almost certainly correlate most with intelligence, but we were also hopeful of finding that the part not due to intelligence would be due to K factor of some "energy-interest" factor in personality.

CaD-48. (34) Immaturity of Opinion. In this test the subject stated his opinions (attitudes) on a wide range of issues and later was asked to state them again in a context of factual statements (3 to each attitude) that would have occurred spontaneously to anyone making a foresighted mature judgment. The shift toward the mature position, measured here, might be an index of immaturity of the original view, of wrongness of the original view, or of willingness to modify. As such it might be expected to load G as well as this factor.

CaD

CORRELATIONS WITH OBLIQUE FACTORS

1. Like surgency, and cyclothymia, tempo
2. Mental initiative, Thurstone's Speed of Closure
3. Femininity, low dominance; unforceful, dependent nature
4. Psychomotor efficiency, Thurstone's Rate of Alternations
5. Fluctuation (inverted); either Emotionally Mature Stable Character vs. Demoralized General Emotionality or a behavior-rating schizoid factor, rigidity with low energy
6. Spearman's "g". General Ability in Personality
7. Thurstone's Flexibility of Closure, excitability and lack of composure, perhaps honesty-integrity but lacking overstatement
8. Trained, Socialized, Cultured Mind vs. Boorishness (inverted); Active Reliable Will
9. Reaction Time, perhaps with alertness
10. General Neuroticism (inverted) as suggested by Eysenck's findings
11. Residual

Identifications: No.	Variable	? 1	? 2	Wi? -3	At^1 4	Pe? 5	G 6	? 7	? 8	Rt?^{2} -9	E? 10	? 11	h^2	R_s
CaD- 1.	T:Intelligence-ACE	--	--	--	--	--	42	10	--	--	--	--	53	84
CaD- 2.	T:Perseveration	--	--	10	--	--	-11	--	-12	--	-15	12	23	--
CaD- 3.	T:Fluency of association	--	--	--	--	--	27	--	13	--	--	--	28	68
CaD- 4.	C:Slow reaction time	--	--	--	--	--	18	-10	--	-24	--	--	16	73
CaD- 5.	T:Speed of judgment	--	--	--	--	--	--	--	--	--	--	14	15	--
CaD- 6.	T:Speed of writing, cancelling	-22	--	--	26	--	--	--	--	--	--	--	36	85
CaD- 7.	T:Speed of closure	--	--	18	--	-14	--	--	--	--	--	--	12	25
CaD- 8.	C:Dark adaptation time	--	11	--	-10	--	--	--	--	--	--	--	04	--
CaD- 9.	T:Oscillation in arith.	26	--	--	-43	--	14	--	--	15	--	--	41	44
CaD-10.	T:Changes in attitude	--	--	--	--	-23	--	--	--	--	--	--	14	68
CaD-11.	T:Book overstatements	--	--	--	--	--	--	--	--	--	--	--	09	49
CaD-12.	T:Peeping dishonesty	--	--	--	--	--	--	-16	11	--	--	--	08	69
CaD-13.	T:Situation dishonesty	-15	--	--	--	--	--	11	--	--	--	--	09	38
CaD-14.	T:Suggestibility	16	--	-35	--	--	12	--	23	--	--	--	40	--
CaD-15.	T:Resistance to shock	--	--	--	--	--	--	--	--	--	--	--	05	86
CaD-16.	T:Persistance on puzzles	--	--	--	--	--	18	--	--	--	--	--	13	--
CaD-17.	I:Good reading preferences	-26	47	-25	--	-10	--	--	--	--	--	--	42	28
CaD-18.	T:Tempo sorting cards	52	--	--	--	23	--	--	--	--	--	--	49	--
CaD-19.	T:Alternations on cube	--	--	--	33	--	--	--	--	--	--	-10	22	--
CaD-20.	T:Two-hand coordination	--	--	-15	--	--	--	-34	--	--	--	--	25	--

CaD

Identifications: No.	Variable	? 1	? 2	Wi? -3	At[1] 4	Pe? 5	G 6	? 7	? 8	Rt?[2] -9	E? 10	? 11	h^2	R_s
CaD-21.	T:Jokes thought funny	35	--	--	14	--	--	--	--	--	--	--	19	76
CaD-22.	T:Reg./Irreg. warned R.T.	-16	--	-31	--	--	--	--	--	18	--	--	13	--
CaD-23.	T:Color-form sorting	-13	--	--	--	-32	--	--	--	--	--	--	19	--
CaD-24.	T:Recall emotional words	--	--	--	--	21	--	--	--	--	--	--	11	--
CaD-25.	T:Emotion impairs memory	--	--	--	--	--	--	--	-17	--	--	--	10	32
CaD-26.	T:Body-sway suggestibility	--	--	-10	--	--	--	--	-10	--	-20	--	10	87
CaD-27.	T:Distortion of facts	--	--	-19	--	--	19	--	--	-15	--	--	17	--
CaD-28.	T:Emotion impairs drawing	--	--	--	--	22	11	--	--	--	--	--	22	--
CaD 29.	T:Criticalness	-12	-10	--	-12	--	--	--	--	--	--	--	06	57
CaD-30.	T:Self-to-other criticism	14	--	--	--	--	--	--	--	--	--	--	09	--
CaD-31.	T:Self-confidence	--	--	--	13	--	--	--	--	--	--	--	04	--
CaD-32.	T:Myokinesis	11	--	--	--	10	--	--	--	--	--	--	10	71
CaD-33.	T:Level of aspiration	--	14	--	--	--	--	--	--	--	--	--	06	59
CaD-34.	T:Use of CMS circles	--	--	--	--	-11	--	28	18	--	--	--	18	44
CaD-35.	T:Slowness with mirror	--	--	--	10	--	--	13	-10	-11	--	--	18	--
CaD-36.	T:Recall consonant stmts.	10	--	-13	--	41	--	--	--	--	--	--	33	49
CaD-37.	C:P.G.R. deflection	--	32	--	--	--	--	--	--	--	--	--	16	--
CaD-38.	T:Purposeful memory	--	--	--	--	--	--	35	--	--	--	-13	28	--
CaD-39.	T:Improvement on a task	--	-10	--	--	--	--	--	--	--	--	--	04	35
CaD-40.	T:Unfamiliar riddles	--	--	--	--	--	27	--	--	--	--	--	20	--
CaD-41.	C:P.G.R. from imagining	--	11	-12	--	--	11	--	--	--	--	--	13	--
CaD-42.	T:Logical assumptions	--	--	44	-13	--	--	14	--	--	--	--	43	73
CaD-43.	T:False reactions	-16	--	--	-16	10	--	10	--	--	--	--	11	--
CaD-44.	T:Immediate memory	--	11	--	--	--	18	--	--	--	--	--	23	--
CaD-45.	T:Concave effort curve	--	15	--	--	--	--	--	--	--	--	--	13	36
CaD-46.	T:Categorizing	--	--	29	--	--	--	--	--	--	--	--	28	--
CaD-47.	T:Information	--	--	--	--	--	32	--	--	--	--	--	30	68
CaD-48.	T:Shift of opinion	-12	--	--	--	--	--	--	-25	--	--	--	18	--

---

[1] Attention, see Psychometric Monograph No. 5.

[2] Reaction Time, see Psychometric Monograph No. 5.

CaD

DIRECTION COSINES AMONG REFERENCE VECTORS

	1	2	3	4	5	6	7	8	9	10	11
1		11	-18	11	07	02	31	24	-04	11	31
2	11		00	01	-11	-17	-01	27	-08	10	-04
3	-18	00		-12	16	10	-29	-35	-37	05	10
4	11	01	-12		-27	00	14	-08	05	-15	-11
5	07	-11	16	-27		-47	-23	-08	-10	17	23
6	02	-17	10	00	-47		15	-13	27	-39	-18
7	31	-01	-29	14	-23	15		05	-22	02	14
8	24	27	-35	-08	-08	-13	05		18	-10	16
9	-04	-08	-37	05	-10	27	-22	18		03	07
10	11	10	05	-15	17	-39	02	-10	03		-03
11	31	-04	10	-11	23	-18	14	16	07	-03	

ANALYSIS CaE

Cattell, R. B. The main personality factors in questionnaire, self-estimate material. *J. soc. Psychol.*, 1950, *31*, 3-38.

The subjects were the same 370 20-year old men and women undergraduates as were subjects at the same time for other studies.

The letters, Roman numerals, and name introducing the items used as variables listed below are the same as those in the "Master Index" obtained from surveying all past questionnaire analyses (Cattell, R. B. The Description and Measurement of Personality. New York, World Book Co., 1946.) They indicate the presumed factor that the question is chosen to represent. QP means a questionnaire with personality items, QA with attitude items, and QI with interest items. Eleven items included to mark Brogden's factors are so indicated. The items were presented to the subjects in scrambled order.

Each question permitted three answers: Yes, Uncertain, or No. In order to facilitate correlation that pole of the reply was considered positive in scoring which received a minority of the actual responses. The answer printed (or underlined) below indicates the pole of the reply which was thus considered positive in scoring for correlation, etc. Tetrachoric correlations and the group centroid method were used.

CaE- 1. QP I. Shyness. Are you a preson relatively free from self-conscious shyness, so that you are not driven to keep in the background on social occasions? (No)

CaE- 2. QP I. When you come to a new place are you rather painfully slow at making new friendships? (Yes)

CaE- 3. QP I. In conversation does your mind tend to keep to one track and deal thoroughly with one topic at a time so that you find difficulty in jumping from topic to topic as quickly as some people do? (Yes)

CaE- 4. QP IIa. General Emotional Hypersensitivity. Are you a person whose feelings are rather easily hurt, e.g., by criticism? (Yes)

CaE- 5. QP IIa. Do you tend to get over-excited and easily rattled in exciting situations? (Yes)

CaE- 6. QP III. Melancholy Agitation. Are you often just miserable and in low spirits for no sufficient reason? (Yes)

CaE- 7. QP III. Do you rather often feel worried and tense with very little cause? (Yes)

CaE- 8. QP IV. General Neurotic Maladjustment. Do you have frequent periods of feeling lonely, even when you are with people? (Yes)

CaE- 9. QP IV. Do you feel that you are not yet well adjusted to life, that very little works out the way it should? (Yes)

CaE-10. QP IV. Do you experience powerful moods, so that other people get the impression that you are changeable? (Yes)

CaE

CaE-11. QP V. Schizoid Asthenia. Do you daydream rather a lot? (No)

CaE-12. QP V. Are you troubled by useless, stray thoughts which run through your mind uncalled for? (Yes)

CaE-13. QP V. Do you find that your memory is poor and lets you down unexpectedly rather frequently? (Yes)

CaE-14. QP VIa. Confident Self-Assertion. Do you generally feel entirely self-confident about your ability to make a success of your life? (No)

CaE-15. QP VIa. Do you unhesitatingly complain to a waiter or the manager if you are served bad food in a restaurant? (Yes)

CaE-16. QP VIb. Hypomanic Aggressiveness. Do you ever try to argue or bluff your way past a guard or a doorman? (Yes)

CaE-17. QP VII. Group Deference. Do you find it difficult to get up and address (or recite before) a large group? (No)

CaE-18. QP VIIIa. Self-sufficiency (v. Gregariousness). Can you become so absorbed in creative work or some interesting job that you do not mind a lack of intimate friends? (Yes)

CaE-19. QP VIIIa. Do you enjoy being in large gatherings, as at parties or dances? (No)

CaE-20. QP VIIIa. When travelling would you rather have some friendly guide to show you everything or would you rather have the adventure of travelling alone? (alone)

CaE-21. QP VIIIb. Independent Self-Sufficiency. Do you usually tend to do your planning alone, without suggestions from, and discussions with, other people? (Yes)

CaE-22. QP IX. Will Character. Would you rate yourself as above average in perseverance, i.e., in tendency to persist in an endeavor in spite of difficulties and distractions? (above average)

CaE-23. QP IX. Do you generally succeed in keeping your emotions, of whatever kind, under very good control? (No)

CaE-24. QP X. Obsessional-Inflexible Will-Character. Are you a person who is scrupulously correct in manners and social obligations (and like others to be the same)? (Yes)

CaE-25. QP X. Are you inclined to be very careful and considerate of other people's feelings (e.g., avoiding the making of thoughtless remarks which you have later to regret)? (No)

CaE-26. QP XI. Relaxed Independence. Are you well described as a happy-go-lucky, carefree, nonchalant person? (Yes)

CaE-27. QP XI. Do you like plenty of excitement in life so that you experience a real craving for it in times of monotony? (No)

CaE-28. QP XII. Variety-loving. Would you invariably prefer the type of job that offers constant change, travel and variety (in spite of other drawbacks)? (No)

CaE-29. QP XII. Are you a talkative person, enjoying any opportunity for verbal expression? (Yes)

CaE-30. QP XIII. Nervous Anxiety and Instability. Are you rather easily startled and distracted by sudden sounds, etc.? (Yes)

CaE-31. QP XIII. Do you suffer from insomnia, or take an unduly long time to fall asleep at night? (Yes)

CaE-32. QP XIV. High-strungness. Do you think that, through tenseness, you seem to use up more energy than most people in getting things done? (Yes)

CaE-33. QP XV. Paranoid Schizothyme. Do you believe that the majority of people, fundamentally are rather self-seeking and malicious? (Yes)

CaE-34. QP XVI. Speed and Flexibility. Are you slow and deliberate in movement or do you move very quickly, rush from one activity to another, eat fast, etc.? (Deliberate, slow)

CaE-35. QP XVII. Liking Thinking. Do you find it interesting to spend time analyzing people's motives? (No)

CaE-36. QP XVII. Are you interested in serious problems of life and given to having long discussions on them with friends? (No)

CaE-37. QP XVIII. Intellectual Leadership. Are you more interested in athletics than in intellectual matters? (Yes)

CaE-38. QP XVIII. Do you tend to dislike being waited on in personal matters (i.e., by personal servants)? (No)

CaE-39. QP XIX. Extravert-Alertness. Are you more alert than the average to what is going on around you, i.e., not absent-minded or neglectful of what people are thinking and doing? (No)

CaE-40. QP XX. Interest in Action. Do you regard yourself as a practical man rather than a theorizer (e.g., you would rather do things than read about them)? (Fond of theory)

CaE-41. Anxiety hysteria. Do you ever have a fit of anxiety or dread (perhaps with tremor or sweating) for no ascertainable reason? (Yes)

CaE-42. Conversion hysteria. Have you ever been a sleep walker, or been known to do a good deal of talking in your sleep? (Yes)

CaE-44. A, F, and H factors. When your friends consider some new undertaking do you generally take an optimistic view or do you tend to be doubtful, cautious and pessimistic? (cautious)

CaE-45. I factor. On most social questions that come up for discussion are you regarded as a person who (a) takes a rather softhearted, perhaps impractically idealistic standpoint, or (b) a rather hardhearted, tough, practical attitude? (a)

CaE-46. D, E, and L factors. Do you feel that on several occasions in recent years you have been found fault with more than you deserve? (Yes)

CaE-47. QI Ia. Interest in People, Social Activity, Talking--v--Things, Detached Creative Interests. Underline two of the following occupations which you would find most congenial if salary and other conditions were about the same: Artist; Y.M.C.A. Secretary; Vacuum Cleaner Salesman; Physicist.

The following two items from the Allport-Vernon Interest-Values Test are considered likely to fall here:

CaE-48. QI Ia and Analysis BrD - V. Are you more interested in reading accounts of the lives and works of such men as (a) Aristotle, Plato and Socrates; (b) Alexander, Julius Caesar, and Charlemagne?

CaE-49. QI Ia and Analysis BrD-VII. If you saw the following headlines of equal size in your morning paper, which would you read more attentively: (a) Threat to constitutional government in foreign country by dictator or (b) Physicists make important discovery concerning the electron.

CaE-50. QI Ib. Guiding People for Their Own Presumed Good--v--Being Coldly Objective and Analysis BrD-II. The main object of scientific research should be the discovery of pure truth, for the pleasure of contemplation, rather than its practical application for industry or war. (Agree)

CaE-51. QI Ib. Underline two of the following occupations which you find most congenial if salary and other conditions were about the same: Personnel Guidance Worker; Manager in manufacturing concern; Social Science Teacher; Engineer.

CaE-52. QI IIa. Thoughtful Interest in Understanding Nature, Science, Theory--v--Political Interest. Underline two of the following occupations which you find most congenial if salary and other conditions were about the same: Office Manager; Banker; Architect; Chemist.

CaE-53. QI IIa and BrD-VI. If the following headlines appeared in equal size in your newspaper, which would you attend to more: (a) Great Improvement in Market Conditions; (b) Protestant Leaders to Consult on Reconciliation?

CaE-54. QI IIb. Altruism and Theoretical Interests and Analysis BrD-XI. The aim of the churches at the present time should be: (a) to bring out moral and charitable tendencies, and to urge people to think more of the good of others; (b) to convey spiritual worship, and a sense of communion with the highest. (b)

CaE-55. QI IIb. Underline two of the following occupations which you find most congenial if salary and other conditions were about the same; Journalist; Teacher; Minister; Real Estate Agent.

CaE-56. QI IIIa. Verbal persuasion, Language, Aesthetic Interest, Theory--v--Practical Control of Materials, (Economic Interest? Political Interests?) Underline two of the following occupations which you find most congenial if salary and other conditions were about the same: advertising man; lawyer; waiter; carpenter; aviator; real estate salesman.

CaE-57. QI IIIa and BrD-III. Would you encourage your children while at school, to (a) try to make several teams and liberal cultural recreational groups or (b) fit themselves as soon as possible by vocational training to be of use to society? (b)

CaE-58. QI IVa. Phillistine Go-Getting, Business, Utility--v--Aesthetic, Aversion Business and Intellectual. Underline two of the following occupations which you find most congenial if salary and other conditions were about the same: Certified Public Accountant; Life Insurance Salesman; Farmer; Artist.

The next five items complete the representation of the 11 Brogden Interest-Value factors mentioned above.

CaE-59. QI IVa and BrD-X. If you should marry (or are married) do you prefer a wife who: (women should answer the alternative form immediately below)

A. Can achieve prestige, commanding admiration from others.
B. Is fundamentally spiritual in her attitude toward life.
C. Is gifted along artistic lines.

Check only one. (not A)

Do you prefer a husband who:

A. Is successful in his profession, commanding admiration from others.
B. Is fundamentally spiritual in his attitude toward life.
C. Is gifted along artistic lines.

Check one. (not A)

CaE-60. QI IVa and Analysis BrD-I. If you had to hear a lecture or read a book on one of the following, which would you prefer: (a) the comparative development of the great religious faiths, or: (b) the comparative merits of the forms of government in Britain and in the United States? (a)

CaE-61. QI IVa and Analysis BrD-I. Which would you rather do on a free afternoon: (a) Enjoy the beauty of an art gallery or some fine scenery? (b) Enjoy a social meeting or a game of cards? (a)

CaE-62. QI IVa and Analysis BrD-IV. If you lived in a small town and had more than enough income for your needs, would you prefer to: (a) apply it productively to industrial development; (b) help to endow the church to which you belong; (c) give it to a university for the development of scientific research; (d) devote it to hospitals? Check one only. (b)

CaE-63. QI IVa and Analysis BrD-VIII. Do you prefer a friend (of your own sex) who: (a) is efficient, businesslike, self-reliant and of a practical turn of mind; (b) is seriously interested in thinking out his attitude to life as a whole? (b)

CaE-64. QA Ia. Radicalism-Conservatism. Choose two of the following attitudes with which you most strongly agree and underline them.

1. Divorce reform, in the direction of divorce simply by mutual consent, is desirable.

2. There should be more strict observance of Sunday as a day of rest and churchgoing.

3. The time has come for some sweeping economic reforms, involving the modification of individualistic capitalism by a government regulated or state controlled economy.

4. Most "progressive" education methods are less sound than the old adage "spare the rod and spoil the child."

CaE-65. QA Ia. Underline that one of the two attitudes here which better expresses your own sentiments.

1. Society should hasten progressive changes and innovations and throw aside outworn traditions and obstructive superstitions.

2. Society should be on guard against rash, headlong changes and when in doubt over old and new, should stick to what has been proven by the past.

CaE-66. QA Ib. Fundamentalist Religious Beliefs. In any opposition between the scientific theory of evolution and the position of the church regarding the Old Testament and a personal God, I follow the former (evolution). (Agree)

CaE-67. QA II. Hard-headed, Rational--v--Sentimental Emotional. Choose two of the following four attitudes with which you most strongly agree and underline them.

1. Capital punishment of condemned criminals is something that should be entirely abolished.

2. The sterilization of mental defectives and people carrying highly inheritable mental disease is a very reasonable and necessary social measure.

3. Vaccination of children against the principal epidemic diseases should be carried out as a routine procedure when they first enter nursery school.
4. It would be an excellent thing if the use of alcohol and tobacco could be totally abolished.

CaE-68. QA II. Society needs to be guided more by hard-headed, scientific, logical and rational considerations and less by emotional intuitions and sentimental feelings. (Disagree)

CaE-69. QA III. Personal Liberty (Anarchy)--v--Coercion (Convention). Choose two of the following attitudes with which you most strongly agree and underline them.

1. Forcible expropriation of certain individual property for the good of the state as a whole, e.g., by a communistic capital levy, is desirable.
2. People should not be made ashamed of nudity but should be free to go unclothed where and when they think fit.
3. Scientists should not allowed to make vivisection experiments except in extremely rare instances, supervised by representatives of the law.
4. The sexual life of the individual is entirely his own concern and is no business of the state, the law or public opinion.

CaE-70. QA III. We need more law and social authority, and the individual should learn to subordinate himself more to social regulation. (Agree)

CaE-71. QA III. Do you think that (a) sometimes the only way to get things done at all is by violence, e.g., by war or revolution, or do you believe (b) that gradual methods, doing no harm to anyone, can be found? (a)

CaE-72. Attitude toward the family. The stable family should be maintained as the basis of society; for one gets more happiness from deep family ties than through attachments dispersed over many friends and acquaintances. (Disagree)

Finally the following more miscellaneous items were added for various specific research interests.

CaE-73. Racial characteristics have more real importance in shaping the individual and the nation than most people believe. (Disagree)

CaE-74. Are you really fond of poetry, so that you would feel truly deprived if prevented from reading it? (Yes)

CaE-75. If you have coffee (coca cola or tea also) rather late at night do you find that it prevents you from sleeping when you are ready for sleep? (Yes)

CaE

The following four items were inserted in the hope of tying in the factors found in "common annoyances" by Cason (see 3 and Harsh, 14, with the general personality factors).

"Below are four classes of common annoyances. Try to pick out two which annoy you most and underline them."

CaE-76. The appearance of some people (e.g., wearing an ill-humored expression, dressing in a slovenly way, having decayed teeth, talking in a shrill voice). (Yes)

CaE-77. Violating manners or morals (e.g., driving inconsiderately, public love-making, telling doubtful jokes when it embarrasses the company, getting drunk and annoying people). (No)

CaE-78. People claiming to be very superior to others (e.g., bragging, having an affected manner, telling others how to do things better). (No)

CaE-79. Unintentionally disagreeable acts (e.g., a person chewing gum loudly, having to wait for a person unavoidably late, a person harping constantly on one theme in conversation). (Yes)

CaE-80. Sex of subject, male or female. (Male)

CaE

LOADINGS ON OBLIQUE FACTORS

1. Anxiety-Depression or General Neuroticism
2. Shyness
3. Interest in Understanding Nature
4. "Radicalism" and "Liking Thinking"
5. Emotional Sensitive Self-Sufficiency vs. Gregariousness
6. "Hard-headed Rationalism" and "Intellectual Leadership"
7. Independent Adventurous Self-Sufficiency
8. Will Control and Character Stability
9. Social Poise and Belief in Coercion vs. Schizoid, Personal Liberty, and Autism
10. Relaxed Independence or Rhathymia
11. Hysterical, Surgent Nervousness
12. Masculinity vs. Femininity
13. Obsessionally Careful and Considerate
14. Hysteroid Aggressiveness
15. Residual or "Interest in Guiding People" vs. "Objective Interests"
16. Spurious Factor of "Annoyance at Appearances"
17. Conventional, Unimaginative Annoyance at Superiority
18. Annoyance at Violation of Manners and Morals
19. Spurious Factor in "Annoyance" Scoring

Identifications: No.	Variable	?^{1} 1	So -2	Is 3	Re -4	Se? 5	G? 6	Ss^2 7	Ne -8	? 9	Pe? -10	? 11	? 12	Sf? 13	? 14	? 15	?^{3} 16	? 17	?^{3} 18	?^{3} 19	h^2
CaE- 1.	Q:Shyness	--	-67	--	--	--	--	--	--	--	--	--	--	--	--	28	--	--	--	--	77
CaE- 2.	Q:Slow making friends	--	-69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	80
CaE- 3.	Q:One track mind	--	-49	--	--	35	--	--	-27	--	--	--	--	--	--	--	29	--	--	--	69
CaE- 4.	Q:Easily hurt	53	--	--	--	--	--	--	29	--	--	--	--	--	--	--	--	--	--	--	51
CaE- 5.	Q:Easily rattled	--	--	--	--	--	--	--	48	--	--	--	--	--	--	--	--	--	--	--	48
CaE- 6.	Q:Often miserable	69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70
CaE- 7.	Q:Often worried	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	63
CaE- 8.	Q:Lonely with people	76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	78
CaE- 9.	Q:Powerful moods	60	-31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	72
CaE-10.	Q:Not adjusted	34	--	--	--	--	--	--	--	--	--	--	--	--	--	-28	--	--	--	--	44
CaE-11.	Q:No day dreams	-36	--	--	--	--	--	--	26	28	--	--	--	--	--	--	--	--	--	--	45
CaE-12.	Q:Stray thoughts	38	--	--	--	--	--	--	--	-53	--	26	--	--	--	--	--	--	--	--	82
CaE-13.	Q:Poor memory	--	-30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	35
CaE-14.	Q:Not self-confident	--	-29	--	--	--	--	-38	--	--	--	--	--	--	--	--	--	--	--	--	58
CaE-15.	Q:Complains to waiter	--	--	--	--	--	34	--	--	31	--	--	--	--	--	--	--	--	--	--	52
CaE-16.	Q:Argues and bluffs	--	--	--	--	--	--	--	--	--	--	--	--	--	41	--	--	-27	--	--	43
CaE-17.	Q:Easy to address	--	51	--	--	--	-30	40	--	--	--	--	--	--	--	--	--	--	--	--	56
CaE-18.	Q:Becomes absorbed	--	--	--	--	25	--	36	--	--	--	--	--	--	--	--	--	--	--	--	48
CaE-19.	Q:Dislikes parties	--	-41	--	--	--	--	--	--	--	26	--	--	--	--	--	--	--	--	--	66
CaE-20.	Q:Travels alone	--	--	--	--	--	--	40	--	--	--	--	--	--	--	--	--	--	--	--	38
CaE-21.	Q:Plans alone	--	--	--	--	--	--	54	-26	--	--	--	--	--	--	--	--	--	--	--	71
CaE-22.	Q:Perseveres	--	--	--	--	--	--	29	--	--	--	--	26	--	--	--	--	--	--	--	32
CaE-23.	Q:Emotion out of control	27	--	--	--	--	-31	--	52	--	--	--	--	--	30	--	--	--	--	--	70
CaE-24.	Q:Correct manners	--	--	--	--	--	--	--	--	--	--	--	--	52	--	--	--	32	--	--	69
CaE-25.	Q:Not considerate	--	--	--	--	--	--	--	35	--	--	--	--	--	35	--	--	--	--	--	48
CaE-26.	Q:Carefree	--	--	--	--	--	--	--	--	--	-33	34	--	-25	--	-29	--	--	--	--	52
CaE-27.	Q:Dislikes excitement	--	--	--	--	33	--	--	--	--	48	--	--	--	--	--	--	--	--	--	70
CaE-28.	Q:Dislikes variety	--	--	--	--	--	--	--	--	--	49	--	29	--	--	--	--	--	--	--	50
CaE-29.	Q:Talkative	--	52	--	--	--	--	--	--	--	--	27	--	--	--	--	--	--	--	--	58
CaE-30.	Q:Easily startled	--	--	--	--	--	--	--	--	--	--	--	-35	--	--	--	--	--	--	--	42
CaE-31.	Q:Insomnia	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29	--	--	58
CaE-32.	Q:Uses up energy	32	--	--	--	--	--	--	31	--	--	42	--	--	--	--	--	--	--	--	49
CaE-33.	Q:Cynical	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	37
CaE-34.	Q:Moves slowly	--	--	--	--	--	--	--	-36	--	--	--	--	--	--	--	--	--	--	--	38
CaE-35.	Q:Dislikes analyzing	--	--	31	30	--	--	--	--	--	--	--	--	-25	--	--	--	--	--	--	51
CaE-36.	Q:Dislikes discussions	-25	--	--	26	--	--	--	--	--	--	--	--	--	--	--	28	--	--	--	56
CaE-37.	Q:Likes athletics	--	--	--	--	--	-38	--	-27	--	--	--	--	--	--	-26	--	--	--	--	65
CaE-38.	Q:Likes service	--	--	--	--	--	--	--	--	45	--	-36	-31	--	32	--	--	--	--	--	58
CaE-39.	Q:Absent-minded	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28
CaE-40.	Q:Likes theory	26	--	--	--	--	25	--	--	--	--	--	--	--	27	--	--	--	--	--	37
CaE-41.	Q:Anxiety	48	--	--	--	--	--	--	--	--	--	--	--	--	34	--	--	--	--	--	55
CaE-42.	Q:Sleep walker	--	--	--	--	--	37	--	--	--	--	--	-29	--	57	--	--	--	--	--	53
CaE-43.	Q:Trivial Compulsions	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29
CaE-44.	Q:Cautious	--	--	--	--	--	--	--	--	--	--	--	--	33	--	--	--	33	--	--	58
CaE-45.	Q:Softhearted	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28	--	--	--	--	43
CaE-46.	Q:Found fault with	41	--	--	--	--	--	--	--	-25	--	36	--	--	--	--	--	--	--	--	54
CaE-47.	I:Artist vs. YMCA	--	--	66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	68
CaE-48.	I:Plato vs. Caesar	--	--	--	-28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	38
CaE-49.	I:Physics vs. government	--	--	27	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30	64
CaE-50.	I:Truth vs. practice	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	31

Identifications: No.	Variable	?[1] 1	SO -2	Is 3	Re -4	Se? 5	G? 6	Ss[2] 7	Ne -8	? 9	Pe? -10	? 11	? 12	Sf? 13	? 14	? 15	?[3] 16	? 17	?[3] 18	19	h^2
CaE-51.	I:Personnel vs. Manager	--	--	--	--	34	--	--	--	--	-33	--	--	--	--	34	--	--	-27	--	80
CaE-52.	I:Chemist vs. banker	--	--	75	--	--	--	--	--	--	--	--	--	--	--	-38	--	--	--	--	91
CaE-53.	I:Market vs. religion	--	--	--	--	-59	54	--	--	--	--	--	--	--	--	--	--	--	45	--	85
CaE-54.	I:Worship vs. charity	--	--	--	30	--	--	34	-33	--	--	--	--	--	28	--	26	-27	46	--	52
CaE-55.	I:Journalist vs. teacher	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43
CaE-56.	I:Lawyer vs. aviator	--	--	-27	-27	--	--	--	--	--	-35	--	--	--	--	--	--	--	--	--	51
CaE-57.	I:Vocation vs. sports	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28
CaE-58.	I:Artist vs. C.P.A	--	--	25	--	--	--	29	--	--	--	--	-29	--	--	--	--	--	-26	--	61
CaE-59.	I:Spiritual spouse	--	--	--	--	--	--	30	--	--	--	--	--	--	28	--	--	--	-30	--	52
CaE-60.	I:Religion vs. govt.	--	--	--	--	25	-36	--	--	--	--	--	-35	--	--	--	--	--	-35	--	56
CaE-61.	I:Art vs. social	--	--	--	--	--	--	37	--	--	--	--	--	--	--	--	--	--	32	--	54
CaE-62.	I:Give to church	--	--	--	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	43
CaE-63.	I:Thinking vs. practical	28	--	--	-26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	47
CaE-64.	J:Divorce vs. Sunday	--	--	--	-52	--	--	--	--	44	--	--	--	--	36	--	--	--	--	--	68
CaE-65.	J:Cautious vs. progressive	--	--	--	25	--	--	--	--	--	--	--	--	--	--	25	--	--	--	--	36
CaE-66.	J:Evolution vs. God	--	--	--	-62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	61
CaE-67.	J:Soft vs. practical	--	--	--	--	--	-51	--	--	--	--	--	--	--	--	29	--	--	--	--	56
CaE-68.	J:Sentiment vs. science	--	--	--	40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-29	37
CaE-69.	J:State vs. free sex	--	--	--	30	--	--	--	--	32	-27	--	--	--	--	--	--	--	--	--	43
CaE-70.	J:Society vs. self	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	37
CaE-71.	J:War vs. gradual	--	--	--	--	--	31	--	--	--	--	--	--	--	--	-27	--	--	--	--	48
CaE-72.	J:Friends vs. family	--	--	--	--	--	--	--	--	--	--	--	--	31	--	--	--	--	--	--	40
CaE-73.	J:Race unimportant	--	--	--	--	--	--	--	26	--	--	--	--	--	--	--	--	--	--	--	33
CaE-74.	I:Likes poetry	--	37	--	--	--	25	--	--	--	--	--	--	--	--	--	--	-65	--	--	88
CaE-75.	Q:Coffee keeps awake	37	--	--	--	31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	49
CaE-76.	J:Annoyed by looks	--	--	--	--	49	--	--	-25	--	--	--	--	--	--	32	98	--	--	--	112
CaE-77.	J:Not annoyed by manners	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	69	--	-57	--	125
CaE-78.	J:Not annoyed by bragging	--	--	--	--	--	--	--	--	--	--	--	--	--	--	46	--	-52	55	51	105
CaE-79.	J:Annoyed by acts	--	--	--	--	--	--	--	--	--	-52	--	40	--	--	--	--	-37	--	69	96
CaE-80.	C:Male sex	--	--	--	--	--	--	--	--	-30	--	--	34	--	--	--	--	--	--	--	69

---

[1] Possibly a combination of Cd, Lo, and Au.

[2] Contains some Sc.

[3] Spurious factor produced by the method of scoring.

DIRECTION COSINES AMONG REFERENCE VECTORS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1		-10	-09	01	00	-04	-13	05	04	-10	09	01	-11	12	04	07	00	-02	-03
2	-10		-21	05	01	11	-11	-06	11	01	01	-12	-02	05	-09	18	16	-13	03
3	-09	-21		-13	-23	-09	11	-09	05	13	-06	16	-01	02	-11	-08	01	31	-09
4	01	05	-13		01	-14	-25	-08	-04	02	13	15	-01	-05	-05	-13	-10	00	18
5	00	01	-23	01		-03	10	25	08	-16	-01	-22	-07	17	39	46	08	-30	15
6	-04	11	-09	-14	-03		04	05	12	-02	-01	01	-01	31	-07	10	-18	23	-09
7	-13	-11	11	-25	10	04		12	01	10	10	-06	07	09	23	15	-18	12	-25
8	05	-06	-09	-08	25	05	12		04	12	-23	-16	-21	-10	11	15	-05	-02	-05
9	04	11	05	-04	08	15	01	04		-08	-32	-27	02	52	-10	05	14	-05	-06
10	-10	01	13	02	-16	-02	10	12	+08		07	00	11	-03	-02	05	-25	01	17
11	09	01	-06	13	-01	-01	10	-23	-32	07		05	-03	10	00	07	-15	08	02
12	01	-12	16	15	-22	01	-06	-16	-27	00	05		-08	-38	16	-22	-34	20	17
13	-11	-02	-01	-01	-07	-01	07	-21	02	11	-03	-08		-09	01	-02	24	02	01
14	12	05	02	-05	17	31	09	-10	52	-03	10	-38	-09		-06	04	-16	-21	-06
15	04	-09	-11	-05	39	-07	23	11	-10	-02	00	16	01	-06		20	-31	23	-02
16	07	18	-08	-13	46	10	15	15	05	05	07	-22	-02	04	20		-14	-26	-16
17	00	16	01	-10	08	-18	8	-05	14	-25	-15	-34	24	-16	-31	-14		-08	-07
18	-02	-13	31	00	-30	23	12	-02	-05	01	08	20	02	-21	23	-26	-08		02
19	-03	03	-09	18	15	-09	-25	-05	-06	17	02	17	01	-06	-02	-16	-07	02	

ANALYSIS CaF

Cattell, R. B. The discovery of ergic structure in man in terms of common attitudes. *J. abn. soc. Psychol.*, 1950, *45*, 598-618.

The subjects were 160 married or engaged men between the ages of 23 and 35. This homogeneity of age, sex, and life situation was thought desirable for comparison of sentiments toward sweetheart and home.

The following Ergs and Sentiments were hypothetically represented by 2 or more variables:

Key Number	Ergs Represented	Key Number	Sentiments Represented
1	Self assertion (mastery, display)	1	To parents
2	Mating (sex)	2	Home (wife, fiancee)
3	Escape (fear)	3	Career (occupation)
4	Pugnacity (anger, aggression)	4	Money (bank account and salary)
5	Food seeking (hunger)	5	The Self
6	Parental protectiveness (tender emotion)	6	Religion (the Deity)
7	Gregariousness (loneliness)	7	Nation (patriotism)
8	Sleep (fatigue)	8	Political party
9	Curiosity (wonder)	9	University (as a student)
10	Appeal (despair, dependence)	10	Literature and drama (as recreation)
11	Self submission (negative self feeling)	11	Athletics (as recreation)
12	Play (phantasy, regression)		

The attitudes expressed in words corresponding with these ergs and sentiments are given as the variables below with the key numbers to identify the erg or sentiment. The score used in the analysis was a combination of the following three measurements:

1. The Preference Method. Each attitude (variable) was paired in turn with every other and the individual indicated which course of action and satisfaction he would prefer. The score for any attitude was the number of times it was chosen.

2. The Information Method. This method presented questions on facts that would come to be known by anyone who might be strongly and habitually interested in the given course of action, 10 questions for each attitude. Scores were ipsative, i.e., proportional to individual's total score.

3. The Psychogalvanic Reflex Method. This required each subject to sit for 2 hours in the P.G.R. circuit while some 500 stimuli were presented to him, 10 per attitude (scattered), 5 being opinions on facts *pro* and 5 *contra* the given attitude, each stated in a few words or short sentence. The score was ipsative: i.e., expressed as a relation to the sigma of the individual's own range.

CaF

The intercorrelations among these diverse methods were all positive but low (mean with pool: preference .21, information .16, and P.G.R. .05). The P.G.R. score was given 2/3 the weight of each of the other 2.

In the list of variables below the key numbers in the right-hand columns indicate the ergs and sentiments which they represent.

		Erg	Sentiment
CaF- 1.	I like to take an active part in athletics and to get exercise.	-7,-8	11
CaF- 2.	I want America to get more protection against the terror of the atom bomb.	3	7
CaF- 3.	I like to see fine paintings, sculpture, art exhibits.	2,9,12	--
CaF- 4.	I want to see a reduction of income tax for people in my income bracket.	3 & all	4
CaF- 5.	I want to have my parents' advice, and to heed their wishes in planning my affairs.	10,11	1
CaF- 6.	I want to become proficient--if possible excelling my colleagues--in my chosen career.	1	3
CaF- 7.	I want to avoid ever becoming an insane patient in a mental hospital.	3	5
CaF- 8.	I like a novel with a love interest concerning a ravishingly attractive heroine.	2	10
CaF- 9.	I want to see any formidable militaristic power that actively threatens the U.S.A. attacked and destroyed.	3,4	7
CaF-10.	I want more time to enjoy sleep and rest.	8	--
CaF-11.	I want to listen to music.	9 & others	--
CaF-12.	I want to (be able to) spend more time at home (present home, not parents' home)	almost all	2
CaF-13.	I want never to do anything that would damage my sense of self respect	1	5
CaF-14.	I like to enjoy the spirit of comradeship that exists among my fellow students at the University of Illinois.	7	9
CaF-15.	I want to see our modern travel--traffic and planes--made less dangerous.	3,6	many
CaF-16.	I want to know more science.	9	R-C*
CaF-17.	I should like to see divorce made easier, e.g., by simple mutual consent.	2?	R-C*
CaF-18.	I want somehow to increase my salary.	6 & all	4,2

CaF

		Erg	Sentiment
CaF-19.	I want to see organized religion maintain or increase its influence.	10	6,R-C*
CaF-20.	I want the left right (underline one before proceeding) wing political party to gain at the next U. S. election.	1,-11	8,R-C*
CaF-21.	I want more time to enjoy my own company--my own thoughts and reveries.	-7,12	5
CaF-22.	I want to attend football games and follow the fate of teams.	7	11
CaF-23.	I want to see those responsible for the present inflation--market manipulators and others--severely punished.	3,4	4,7
CaF-24.	I want to see more good restaurants, serving attractive meals, set up around this town.	5	5
CaF-25.	I should like to spend more time learning about and controlling mechanical things, engines, electrical gadgets.	9	--
CaF-26.	I want to spend more money in insurance against illness and accident.	3	4
CaF-27.	I want America to be and remain the world's most powerful and influential country.	1,6,10	7
CaF-28.	I want to get a good reputation among those in my profession who can help my advance.	1,-11	3,5
CaF-29.	I like being on the fine campus, seeing the buildings, of the University of Illinois.	13	9
CaF-30.	I like to go to a good movie or play every week or so.	2,7,12	10
CaF-31.	I want to make love, to a woman I find beautiful.	2	2
CaF-32.	I want to travel and explore unknown corners of the earth.	9,-7	--
CaF-33.	I want a will power that can keep all unwise impulses under irreproachable control.	1	5
CaF-34.	I want to get my wife the clothes she likes and to save her from the more toilsome household drudgeries.	1,6	2,4,5
CaF-35.	I want to take part in political meetings, campaigns, elections, etc.	1,7	8

CaF

		Erg	Sentiment
CaF-36.	I want to be smartly dressed, with a personal appearance that commands admiration.	1,-11,12	5
CaF-37.	I want to be able to get up a little later in the mornings than I have to now.	8,12	-3
CaF-38.	I want to do more recreational reading (i.e., reading other than for examinations and college courses).	9,12	10
CaF-39.	I want to drive myself to the utmost, and deprive myself of pleasure if necessary, to live up to the standards I accept.	1,4,-6	5
CaF-40.	I want to be as much as possible in rural surroundings, amidst nature and the wild life of the countryside.	-7,11,12	--
CaF-41.	I want to see birth control made available to, and practiced by, all people who need to control the size of their families.	2	R-C*
CaF-42.	I want to continue to live in America, the most congenial country for me in people and ideals.	6,7,10	7
CaF-43.	I want my parents never to be lacking the necessities of comfortable living.	6,10	1
CaF-44.	I want to feel that I am in touch with God, or some principle in the universe that gives meaning and help in my struggles.	10	6,R-C*
CaF-45.	I would like to spend more on really fine foods, candy and delicacies.	5,12	5
CaF-46.	I want to be able to do more for children who are sick, or poor or uncared for, anywhere in the world.	6	--
CaF-47.	I like playing indoor, social games, such as card games.	7,12	--
CaF-48.	In matters of reasoning (e.g., philosophical and moral issues) I want to fight authority if my opinions conflict.	1,4,-7,-11	5,R-C*
CaF-49.	I want to spend somewhat more on drinking and smoking than I am now able to.	5,12	--
CaF-50.	I want to be able to insure for my children the best education that they could possibly have.	6	2

---

*Attitudes that have actually occurred in, or are very likely to occur in, the factor of Radicalism-Conservatism as established by Thurstone and others, are indicated here by R-C.

CaF

LOADINGS ON OBLIQUE FACTORS

1. Parental, Protective Erg
2. Mating Erg
3. Gregarious Erg
4. Appeal-Dependence Erg
5. Curiosity Erg
6. Escape or Fear Erg
7. Regressive, Narcistic Play
8. Self Sentiment
9. Self Assertion and Display

	Identifications:	If	Ix	Ia	Ir	Cv	Fe	?[2]	?	?
No.	Variable[1]	1	2	3	4	-5	6	7	8	9
CaF - 1.	X:Likes athletics	--	--	69	--	--	--	--	--	--
CaF - 2.	X:Protection from bomb	--	37	--	--	--	51	--	--	--
CaF - 3.	X:likes art	--	--	--	--	-44	--	--	--	--
CaF - 4.	X:Lower taxes	--	--	25	--	--	33	--	--	--
CaF - 5.	X:Wants parents' advice	-34	--	--	41	--	--	--	--	36
CaF - 6.	X:Proficient in career	--	--	--	--	--	--	--	--	33
CaF - 7.	X:Avoid insanity	--	--	--	--	--	37	--	29	--
CaF - 8.	X:Novel with love	-33	33	--	--	--	--	--	--	--
CaF - 9.	X:Attack any enemy	--	--	--	--	--	49	-33	--	--
CaF -10.	X:More sleep	--	--	--	--	--	--	--	--	--
CaF -11.	X:Likes music	--	--	--	--	-52	--	--	--	--
CaF -12.	X:Likes to be home	--	--	--	--	-27	--	--	--	--
CaF -13.	X:Protect self respect	--	--	--	--	--	--	--	44	33
CaF -14.	X:Likes comradeship	--	--	32	--	--	--	--	--	--
CaF -15.	X:Safer travel	27	--	--	--	--	--	--	--	--
CaF -16.	X:Learn more science	--	--	--	--	-50	--	--	--	--
CaF -17.	X:Easier divorce	--	--	--	--	--	--	43	-27	--
CaF -18.	X:Increase salary	42	-28	--	--	--	--	--	--	31
CaF -19.	X:Stronger religion	--	--	--	62	--	--	--	--	--
CaF -20.	X:Go left in politics	--	--	--	--	-25	--	--	--	-29
CaF -21.	X:Time for meditation	-29	--	--	--	--	--	34	--	--
CaF -22.	X:Likes football	--	--	42	--	--	--	--	--	37
CaF -23.	X:Block inflation	-27	38	--	--	--	44	--	--	--
CaF -24.	X:More restaurants	--	34	--	--	--	29	--	--	--
CaF -25.	X:Learn mechanics	--	--	--	--	-33	--	--	-31	--
CaF -26.	X:More insurance	--	--	--	--	--	27	--	--	--
CaF -27.	X:Make U. S. powerful	30	--	--	29	25	--	--	--	--
CaF -28.	X:Advance in profession	--	--	--	--	--	--	--	32	27
CaF -29.	X:Likes U. of Ill. campus	--	--	--	--	--	--	--	--	--
CaF -30.	X:Likes movies	--	54	--	--	--	--	--	--	37
CaF -31.	X:Wants to make love	--	41	--	--	--	--	--	--	--
CaF -32.	X:Likes travel	--	33	--	--	--	--	--	--	--
CaF -33.	X:Strong will	--	--	--	--	--	--	--	36	--
CaF -34.	X:Please wife	38	-30	--	--	--	--	--	29	--
CaF -35.	X:Active in politics	--	--	--	-31	--	--	--	--	-39
CaF -36.	X:Dress smartly	--	--	--	--	52	--	--	--	30
CaF -37.	X:Sleep longer	--	--	--	--	--	--	--	--	--
CaF -38.	X:More reading	--	30	--	--	--	--	--	30	--
CaF -39.	X:Drive self	-34	--	--	--	--	--	--	--	--
CaF -40.	X:Likes nature	--	--	--	--	--	--	--	--	-29
CaF -41.	X:For birth control	26	29	--	-34	--	--	--	--	--
CaF -42.	X:Live in America	53	--	--	--	--	--	--	--	--
CaF -43.	X:Protect parents	44	--	--	26	--	--	--	--	--
CaF -44.	X:In touch with God	--	--	--	67	--	--	--	--	--
CaF -45.	X:More food and candy	--	--	--	--	--	--	47	--	--
CaF -46.	X:Help children	42	--	--	--	--	--	--	--	--
CaF -47.	X:Likes cards	--	--	32	--	--	--	25	--	27
CaF -48.	X:Likes argument	--	26	-40	--	--	--	--	--	--
CaF -49.	X:More drink and smokes	--	--	--	--	--	--	56	--	--
CaF -50.	X:Educate children	48	--	--	--	--	--	--	--	--

---

[1] The variables combine the Q or A method and two T methods.

[2] Marital boredom.

The unrotated factor matrix providing communalities and the direction cosines among vectors are filed with the American Documentation Institute.

ANALYSIS CaG

Cattell, R. B. A factorization of tests of personality source traits. Brit. J. Psychol. Stat. Sec., 1951, 4, 165-178.

This was the second analysis of objective tests of personality (see Analysis CaD). This analysis includes two tests to mark each of the 11 factors found in Analysis CaD. The subjects were those used in the earlier analyses. Since not all subjects took all of the tests, the correlation coefficients are based on a number of subjects varying from about 404 down to about 30. The multiple group centroid method was used.

CaG- 1. Fluency of Association. See CaD-3. Marker for CaD factor 6.

CaG- 2. Perseveration or Disposition Rigidity. See CaD-2. Marker for CaD factor 10.

CaG- 3. Speed of Judgment. See CaD-5. Marker for CaD factor 11.

CaG- 4. Slowness of Reaction Time. See CaD-4. Marker for CaD factor 9.

CaG- 5. Ratio of Regularly Warned to Irregularly Warned Reaction Times. See CaD-22. Marker for CaD factor 9.

CaG- 6. Alternating Perspective (Cube Fluctuation). See CaD-19. Marker for CaD factor 4.

CaG- 7. Tempo. See CaD-18. Marker for CaD factor 1.

CaG- 8. Verbal and Numerical Ability on the A.C.E. Test. See CaD-1. Marker for CaD factor 6.

CaG- 9. Oscillation. See CaD-9. Marker for CaD factor 4 (and 1).

CaG-10. Number of Jokes Considered Funny. See CaD-21. Marker for CaD factor 1.

CaG-11. Absence of Questionable Preferences in Reading. See CaD-17. Marker for CaD factor 2 (and 3).

CaG-12. Ratio Purposeful to Chance Observation and Memory. See CaD-38. Marker for CaD factor 7 (and 11).

CaG-13. Impairment of Mental Performance by Embarrassing Emotion. See CaD-25. Marker for CaD factor 8.

CaG-14. Immaturity of Opinion. See CaD-48. Marker for CaD factor 8.

CaG-15. Suggestibility to Authority. See CaD-14. Marker for CaD factor 8.

CaG-16. Ability to State Logical Assumptions. See CaD-42. Marker for CaD factor 3.

CaG-17. Ability to Suggest Classifications. See CaD-46. Marker for CaD factor 3.

CaG-18. Ratio Consonant to Dissonant Statements Recalled. See CaD-36. Marker for CaD factor 5.

CaG-19. Colour-Form Ratio in Sorting. See CaD-23. Marker for CaD factor 5.

CaG-20. Two Hand Coordination. See CaD-20. Marker for CaD factor 7.

CaG-21. Body-Sway Suggestibility. See CaD-26. Marker for CaD factor 10.

CaG-22. Magnitude of Mean P.G.R. Deflection. See CaD-37. Marker for CaD factor 2.

CaG-23. Ratio of Higher to Lower Mental Set Performance. The task requires maintenance of set at three levels: (1) to read every other word in a passage (arranged to make sense); (2) to note for reproduction all objects mentioned in certain categories (colours, personal characteristics); (3) to note objects simultaneously falling in three of these categoried. The subject is scored on ratio of success in highest to other two tasks. Theory is that schizoid (Cattell's A-factor) person will do less well on higher sets.

CaG-24. Alertness in Following Directions. The subject is here scored on sum of successful observations (recalled immediately after the performance) in CaG-2 and CaG-3 above. The hypothesis is that high on Cattell's G factor (5) will be associated with care and conscientiousness in this alertness-demanding situation.

CaG-25. Index of Carefulness. Also derived from CaG-23. The subject is scored in middle and upper sets on the number of instances wrongly categorizes. The raw score is inverted to give 'carefulness' not errors. Assumed to express both Cattell's F- and G+ factors.

CaG-26. Tendency to Remember Easier Tasks. The subject is asked to solve two pages of riddles, those on one page being more difficult than the next. The score is number recalled after difficult page minus number recalled after easy page. Presumed to test dominance factor.

CaG-27. Ratio of Self-Criticism to Self-Approval. The subject writes down in one minute single words or short phrases describing his undesirable and desirable characteristics. The ratio is number of self-criticisms to number of self-approvals. Presumed to test Cattell's factors A- or E+.

CaG-28. Lack of Planning Ability. Two tasks used: making words from groups of letters and picking, from 9 numbers, pairs that would sum to a given number. The composite score was based on how evenly the subject distributed his efforts, how much he used scratch paper, and how systematic he was in the arithmetical section. Deliberation and planning conduces to a low score. Possibly a test of Cattell's factors C, G, or I.

CaG-29. Ratio of Emotional to Non-Emotional Association. The subject is given a key word and 2 choices of an associative word. In each item, one word was more emotional than the other. The score is the ratio of emotional to non-emotional association words. Assumed to test emotionality, Cattell's C factor.

CaG-30. Sympathetic Increase in Emotional Associations. CaG-29 was in 2 parts with a story of fear interposed. This score was the number of emotional words chosen on the second page minus the number of emotional words chosen on the first page. Assumed to test Cattell's A+ or C- factor.

CaG-31. Sympathetic Increase in Emotional Recall. A list of words, some emotional and some matter of fact, was presented: the subject then recalled them 3 times, (i) directly after presentation, (ii) after reading a 'fearful' story, and (iii) after reading several jokes. The increase in number of emotional words recalled was measured.

CaG-32. Ratio Emotional to Non-Emotional Recall. In the preceding test the ratio of emotional to non-emotional words recalled was taken for the first situation (before sympathetic effect). Assumed to test Cattell's H factor.

CaG-33. Myokinesis Drift. The subjects were asked to draw two series of ten vertical lines. The distance of the base line of these lines from a horizontal line through the starting point at a point 6 ins. along the base line is the measure of drift; upward drift is positive. Assumed to test Cattell's C factor.

CaG-34. Effect of Tempting Distraction upon Recall. A scientific passage was read by the subject, and he was tested on recall of what he had read. After reading to the middle of an interesting story the subject was again tested for knowledge of the passage. The score was number of correct answers to first test minus number of correct answers to second. A negative or low positive score indicates no distraction. Assumed to measure poor personality integration, i.e., low on Cattell's G factor.

CaG-35. Influence of Unrelated Frustration on Recall. Instead of finishing the interesting story the subject was given another task and then questioned on the original passage. This interruption was quite frustrating. The score was the number of correct answers to the first test minus the number of correct answers to this. Intended as a measure of Cattell's C factor.

CaG-36. Influence of Frustration on Judgment. This was two separate pages of judgment tests (underlining the word that did not belong). The second page followed the frustrating situation in CaG-35. The score was for correct answers on the first page minus the number on the second page (after frustration). Intended as a measure of the emotionality of Cattell's C and D factors, mostly the latter.

CaG-37. Ratio of Emotionally Interesting to Non-Emotional (Dry) Reading Speed. The number of words read in an interesting story was divided by the number read in the same length of time in a scientific passage. It was assumed that an individual high on Cattell's G would maintain good speed in the uninteresting material.

CaG-38. Masculinity versus Femininity. Terman and Miles Attitude-Interest Analysis Test. Terman and Miles' weighted scores were used. Inserted to explore possibility that Cattell's I factor may be masculinity. See Analysis FT.

CaG-39. Sex of Student (Positive for Male).

CaG-40. Poor Logical Consistency. In this test the subject expressed his attitudes on a wide range of issues. The attitude or belief statements dispersed through the test could be gathered together in groups of 3, deliberately designed to present the logical coherence of a first and second premise and conclusion in a syllogism. The subject was scored on the number of consistent syllogisms. It is assumed that the low integration of Cattell's C factor will show itself in an occasional need to accept logically inconsistent views.

CaG-41. Imaginative Synasthesia. Modernistic drawings were presented to the subject along with a series of abstract terms, e.g., coyness, boredom, doubt, etc., which the artist (Abner Dean) had used as titles for his drawings. The subject was asked to choose the best title. It is assumed that this artistic sensitivity is the essence of Cattell's I factor. See CT-3.

CaG-42. Immoderation of Statement. In CaG-14, 15, 40 and 45 the subject was scored for the number of extreme answers ('absolutely certain' and 'absurd or stupid').

CaG-43. Personal Excuses. At the end of the testing week the subject was asked to list ways in which various tests and ratings might be 'unfair' to him. The score: number of excuses.

CaG-44. Extra-Punitive Criticisms. The subject was asked for criticisms of the tests in general. Score: the number of remarks blaming examiner or external circumstances for anticipated poor score.

CaG-45. Tendency to Agree with Majority. Statements by authorities were given and below each were presented the percentage of students agreeing and disagreeing. Score: number of times the subject agreed with higher percentage. (Overlaps with CaG-15.)

CaG-46. After-Image Time. This was the length of time between the disappearance of the positive after-image and the appearance of the negative after-image (indicated by the subject pressing a key). There were 4 trials in a dark box after standard exposure. Assumed that in neurasthenia after-images are unduly long, and perhaps affected by desurgency.

CaG-47. Erroneous Reactions when Maintaining Complex Mental Sets. The subject reacts to a complex set of lights and buzzers by pressing a key with his left or right hand, or not at all, according to the sequence. Score: number of errors. Assumed to measure high excitability and low frustration tolerance.

CaG-48. Slowing of Reaction Time by Complex Instructions. The reaction time for correct reaction in the above complex task was divided by the subject's normal, simple reaction time to visual and auditory stimuli. Possibly an expression of the general level of inhibition and therefore of Cattell's F factor.

CaG-49. Healthy Schneider Index. The usual composite index of changes in pulse rate and blood pressure from lying down to standing and time to return to normal after exercise. Added for evidence on psychosomatic theories.

CaG-50. Basal Metabolic Rate. The subject's smallest O_2 consumption for 4 runs (6 minutes each), converted to calories/hr./sq. metre of body area by reference to sex-age tables. Introduced to test relations with Cattell's H factor.

CaG-51. Metabolic Rate Change with Stimulation. Measured under 3 types of stimulation: unusual arithmetic problems, muscular work (ergograph), and emotional stimulation (electric shock and loud noise). Intended as a measure of sympathetic reactivity, hypothesized as Cattell's D or H factors.

CaG-52. Pitch of Voice. While the subject was answering questions his voice was matched for essential pitch with one of 9 grades on a standard voice record.

CaG-53. Salivary pH. The subject accumulated saliva for 1 minute. pH was read 1 minute after ejection on the usual electrical pH meter.

CaG-54. Lack of Muscle Tonus. While the subject was reading, his left arm rests on a trolley. The arm was suddenly snatched backwards by a falling weight attached to the trolley and the distance the arm moved was recorded by a stylus tracing interrupted after 1/5 second. Designed to measure resting muscle tonus, as representing a temperament factor, probably Cattell's J.

CaG-55. Eidetic Imagery. Following Allport's findings, eidetic imagery proneness is measured with eight pictures chosen for subtlety of colour and form. Points given for externalizing and locating the picture, sensations of eye accommodation, etc., colour minus pure form, non-verbalizable form minus verbalizable form. The subtractions ruled out goodness of memory. Hypothesis: that Jaensch's types may be unitary personality factors already known.

CaG-56. P.G.R. Upward Drift. After a task in which the subject was shocked, shock apparatus was disconnected and the subject was assured he could relax. The P.G.R. upward drift for 3 minutes was recorded. Hypothesis: measures of cyclothyme's trustful readiness to relax (Cattell's A+ or L- factor).

CaG-57. Improvement (Learning) in Mirror Tracing under Stimulation. Three trials were given the subject on each of 3 patterns. In the second trial the subjects were shocked for poor performance. Shock was also administered on the first pattern of the third trial. The second pattern was done without mirror, as a control measure of dexterity. The score was reduction of error score between first and third performance. Hypothesis: that sheer mirror drawing ability is cancelled by the comparison and this represents effective performance under stress or strength of escape motivation.

CaG-58. Carelessness over Following Instructions. Number of slips made by the subject on 3 mirror tracings and 3 ordinary tracings of designs. Hypothesis: that carefulness measures G factor.

CaG-59. Impairment of Performance by Fright. Three equally difficult finger mazes, the first done under normal conditions, the last two under conditions of fright (electric shocks on maze 2 and a rat and some cockroaches in the cage surrounding the maze 3). The score was the turns per minute for maze 1 divided by the turns per minute in mazes 2 and 3. Intended to test the emotionality factors.

CaG-60. Speed on Finger Maze. Number of turns per minute on five finger mazes. Intended to measure readiness for trial-and-error in H factor.

CaG-61. Fidgetometer Frequency. A pneumatic instrument shows number of body movements per minute on a moving drum, expecially of leg and foot. The score was movements per minute during test 55. Hypothesis: muscle tension in a standard situation more sensitive than P.G.R., especially for tension of schizothyme.

CaG-62. Increase of Pulse Rate in Stress. Difference in normal P.R. and the P.R. after the frightening mirror tracing shock-situation was recorded. Presumed to measure Cattell's D or I factor.

CaG-63. Loss of Recall from Frustration and Humiliation. The subject memorizes two lists of phrases and recalls each after interpolated activity. Score: difference in number of phrases recalled after a neutral experience (easy riddles) and after a frustrating or humiliating task. Hypothesis: an inverted measure of ego strength, i.e., of Cattell's C factor.

CaG-64. Sympathetic Increase in Timidity Associations. Similar to CaG-30 except that only the increase in associative words appropriate to a fear emotion was counted. Hypothesis: a measure of Cattell's H- factor, indicating proneness to timid withdrawal responses.

Note.--Variables 26, 27, 32, 34, 36, 38, and 41 are retained in the matrix for hyperplane but not involved in any definition or discussion of factors beyond this point because of the negligible reliability which they proved to have.

CaG

LOADINGS ON OBLIQUE FACTORS

1. Feminine, unforceful, dependent
2. General intelligence (plus low perseveration rigidity and low sway suggestibility)
3. Cyclothymia
4. Perseverance, determination, aspiration, and self-control; Factor K; Thurstone's F
5. General psychomotor efficiency; Thurstone's D
6. Surgency?
7. Has Marker for CaD, factor 8; physiological relation to factor 1
8. General neuroticism (inverted)?
9. Overstimulated insecure? CaD, factor 11?
10. Rigidity, low energy; Factor H or C
11. Might be CaD, factor 9

	Identifications:	Mf?	G	?	?	?	?	?	?	?	?	?	
No.	Variable	-1	2	3	4	5	6	7	8	9	10	11	h^2
CaG- 1.	T:Fluency of association	--	47	--	--	--	36	--	--	--	--	--	49
CaG- 2.	T:Perseveration	--	-42	--	--	--	--	--	--	--	--	--	26
CaG- 3.	T:Speed of judgment	--	--	25	--	--	27	--	--	33	--	--	40
CaG- 4.	C:Slow reaction time	--	--	--	--	--	--	--	--	--	-41	--	31
CaG- 5.	C:Reg./irreg. warned R.T.	--	--	--	46	--	--	--	--	--	--	-41	43
CaG- 6.	T:Alternations on cube	--	--	-30	-27	32	31	--	31	--	--	--	49
CaG- 7.	T:Tempo sorting cards	--	--	55	--	-37	-34	--	--	-35	--	--	74
CaG- 8.	T:Intelligence-ACE	--	84	--	-29	--	--	--	--	--	--	--	82
CaG- 9.	T:Oscillation in arith.	--	--	35	--	--	--	30	--	--	--	--	23
CaG-10.	T:Jokes thought funny	-30	--	--	--	--	--	--	--	--	--	--	18
CaG-11.	I:Good reading preferences	-57	--	-58	65	--	--	--	--	--	--	--	--
CaG-12.	T:Purposeful memory	--	--	--	--	--	--	--	--	--	--	--	18
CaG-13.	T:Emotion impairs memory	--	--	--	--	--	--	--	--	--	--	--	09
CaG-14.	T:Shift of opinion	--	--	--	--	38	--	-42	--	--	--	-29	38
CaG-15.	T:Suggestibility	--	--	49	--	--	--	46	--	--	--	-25	55
CaG-16.	T:Logical assumptions	51	--	-26	-27	--	--	--	--	--	--	--	68
CaG-17.	T:Categorizing	--	--	--	--	33	34	-30	-34	33	--	--	56
CaG-18.	T:Recall consonant stmts.	-64	--	--	--	--	--	--	--	--	-60	--	84
CaG-19.	T:Color-form sorting	28	--	--	--	--	--	--	--	--	32	--	42
CaG-20.	T:Two-hand coördination	--	41	--	--	--	--	--	--	--	--	--	24
CaG-21.	T:Body-sway suggestibility	--	-27	--	--	--	--	29	--	--	--	--	31
CaG-22.	C:P.G.R. Deflection	--	--	--	34	--	--	--	--	--	33	--	32
CaG-23.	T:Higher/lower mental set	--	40	--	--	--	--	--	--	--	--	--	29
CaG-24.	T:Alertness in directions	--	48	--	-28	32	--	--	--	--	--	--	44
CaG-25.	T:Carefulness	--	-38	--	54	--	--	--	-63	--	--	--	95
CaG-26.	T:Remembers difficult tasks	--	--	-29	--	--	--	--	--	--	--	--	24
CaG-27.	T:Self-criticism/approval	--	--	--	--	-30	-34	--	--	--	--	--	20
CaG-28.	T:Lack of planning	--	--	--	--	--	--	--	--	--	--	--	14
CaG-29.	T:Chooses emotional words	47	37	32	--	--	-38	--	--	--	--	--	77
CaG-30.	T:Fear increases CaG-29	--	--	-29	--	--	--	--	--	--	-32	--	24
CaG-31.	T:Fear increases CaG-32	--	--	--	--	--	--	--	--	--	--	--	16
CaG-32.	T:Recalls emotional words	--	--	--	25	--	--	34	--	29	--	--	33
CaG-33.	T:Myokinesis drift up	--	--	--	--	--	--	--	41	--	-25	35	42
CaG-34.	T:Distraction affects recall	35	--	--	--	--	--	--	--	--	--	--	26
CaG-35.	T:Frustration affects recall	--	--	--	--	--	--	--	-27	--	--	--	17
CaG-36.	T:Frustration affects judgment	--	-41	-39	--	36	25	--	-25	--	--	--	80
CaG-37.	T:Speed emot./dry reading	--	--	29	--	--	--	--	--	-31	--	-31	38
CaG-38.	I:Masculinity	--	--	31	-46	--	38	40	95	-29	--	--	--
CaG-39.	C:Male sex	51	--	--	--	--	-25	--	--	--	--	--	45
CaG-40.	T:Poor logical consistency	--	--	--	--	--	--	--	-30	--	-30	27	38
CaG-41.	T:Artistic synasthesia	--	--	--	--	27	--	--	--	--	32	--	40
CaG-42.	T:Extreme statements	--	--	--	--	--	--	--	--	--	--	--	22
CaG-43.	T:Personal excuses	29	--	--	--	--	--	--	--	26	--	--	22
CaG-44.	T:Extra-punitive	--	--	--	--	--	--	--	--	--	--	--	08
CaG-45.	T:Agrees with majority	-31	--	--	--	--	--	--	--	--	--	-46	37

CaG

No.	Identifications: Variable	Mf? -1	G 2	? 3	? 4	? 5	? 6	? 7	? 8	? 9	? 10	? 11	h^2
CaG-46.	C:After-image time	43	--	--	--	28	30	--	--	--	--	-41	56
CaG-47.	T:Complex mental sets	--	--	34	--	-58	--	-30	--	--	--	34	70
CaG-48.	T:CaG-47 / R.T.	--	--	--	44	--	29	--	--	--	--	-30	40
CaG-49.	C:Blood pressure index	--	50	--	--	--	--	29	--	--	-45	--	64
CaG-50.	C:Metabolic rate	45	--	--	38	--	--	43	--	69	--	--	--
CaG-51.	C:Stimulation affects M.R.	51	--	--	--	--	--	56	65	39	--	--	--
CaG-52.	C:Pitch of voice	-33	--	--	--	--	--	30	--	--	--	31	42
CaG-53.	C:Salivary pH	--	--	--	--	--	--	--	--	--	--	39	30
CaG-54.	C:Lack of muscle tonus	--	32	--	33	--	--	--	-27	--	--	--	69
CaG-55.	T:Eidetic imagery	-41	31	55	--	-44	37	--	--	--	--	--	--
CaG-56.	C:P.G.R. upward drift	--	--	--	28	-42	--	--	--	77	--	--	98
CaG-57.	T:Shock helps learning	--	--	--	--	--	27	--	--	--	--	--	23
CaG-58.	T:Carelessness in drawing	--	--	--	--	--	--	--	--	26	-36	--	30
CaG-59.	T:Fright impairs CaG-60	--	-31	--	--	--	--	30	--	--	--	--	31
CaG-60.	T:Speed on finger maze	--	--	--	--	--	--	-39	--	--	-58	--	55
CaG-61.	T:Fidgetometer frequency	--	--	--	--	--	-43	--	--	--	-42	--	41
CaG-62.	T:Fright increases pulse	--	--	-54	--	--	--	-53	--	--	--	--	68
CaG-63.	T:Emotion impairs recall	27	--	--	--	--	--	--	--	--	--	--	20
CaG-64.	T:Fear increases fear association	--	--	-27	--	--	--	-25	--	--	--	--	24

CaG

INTERCORRELATIONS AMONG THE FACTORS

	1	2	3	4	5	6	7	8	9	10	11
1		04	31	16	-59	00	-19	-02	-13	-13	-03
2	04		05	-24	-07	05	01	27	06	-10	08
3	31	05		12	-58	-03	21	-22	-06	-01	-12
4	16	-24	12		-43	-25	-03	-29	21	19	-07
5	-59	-07	-58	-43		30	37	12	-12	11	10
6	00	05	-03	-25	30		18	08	21	15	00
7	-19	01	21	-03	37	18		-14	21	24	12
8	-02	27	-22	-29	12	08	-14		-30	19	18
9	-13	06	-06	21	-12	21	21	-30		03	00
10	-13	-10	-01	19	11	15	24	19	03		05
11	-03	08	-12	-07	10	00	12	18	00	05	

ANALYSIS CD

Crissy, W. J. E., and Daniel, W. J. Vocational interest factors in women. J. app. Psychol., 1939, 23, 488-494.

The data used in this analysis were the intercorrelations for 500 married women reported by E. K. Strong in the manual of his Vocational Interest Blank for Women. See Analysis Sg. The names of the scales used for variables appear in the table of loadings. For purposes of this survey these variables will be considered parallel to those in the blank for men when the names are the same. (YMCA will be considered parallel to YWCA.)

LOADINGS ON ORTHOGONAL FACTORS

MA. Interest in male association
P. Interest in people
L. Interest in language
S. Interest in science

No.	Identifications: Variable	Gs MA	Iw P	Il L	Is S	h^2
CD- 1.	I:Author	-84	-28	34	-27	97
CD- 2.	I:Librarian	-74	--	42	--	76
CD- 3.	I:Artist	-62	-61	37	--	90
CD- 4.	I:Physician	-55	--	--	70	82
CD- 5.	I:Dentist	28	-46	--	68	80
CD- 6.	I:Life Insurance Saleswoman	-26	29	-42	-27	40
CD- 7.	I:Social Worker	-50	69	25	--	80
CD- 8.	I:Teacher of English	--	38	76	-35	85
CD- 9.	I:Teacher in General	--	50	67	--	79
CD-10.	I:Teacher of Social Sciences	38	78	32	--	86
CD-11.	I:Lawyer	-25	80	--	--	73
CD-12.	I:Y.W.C.A. Secretary	--	78	--	--	70
CD-13.	I:Teacher of Math. and Science	58	--	--	65	78
CD-14.	I:Nurse	72	--	--	29	64
CD-15.	I:Secretary-Stenographer	71	--	-42	-45	88
CD-16.	I:General Office Worker	77	--	-57	--	97
CD-17.	I:Housewife	83	--	-36	--	89
CD-18.	I:Masculinity-Femininity	--	--	-30	35	26

ANALYSIS CE

Cattell, R. B. The diagnosis and classification of neurotic states: a re-interpretation of Eysenck's factors. J. nerv. ment. Dis., 1945, 102, 576-589.

This study consists of rotation and re-interpretation of the factors obtained by Eysenck, Analysis Ey. The variables are described more fully in that analysis.

LOADINGS ON OBLIQUE FACTORS

I. A combination of C, Emotionally Stable Character vs. Demoralized General Emotionality, and G, Positive Character Integration, vs. Immature Dependent Character, both with loads in reverse.

II. Probably I, Sensitive, Imaginative, Anxious Emotionality

III. B, General Mental Capacity in Personality vs. Mental Defect

IV. F, Surgency vs. Desurgent, Agitated Melancholy

No.	Variable	Identifications: Pc I	E II	G III	?[1] IV	h^2
CE- 1.	C:Age above 30	--	--	-26	-27	15
CE- 2.	C:Unskilled	-26	-29	-53	--	49
CE- 3.	C:Unemployment	--	--	-67	--	49
CE- 4.	C:Degraded work history	--	--	-32	--	22
CE- 5.	C:Abnormality in parents	66	--	--	--	48
CE- 6.	C:Unsatisfactory home	41	--	--	--	38
CE- 7.	C:Married	--	--	--	-44	24
CE- 8.	C:No group membership	--	--	-64	--	50
CE- 9.	C:Narrow interests	--	--	-50	--	63
CE-10.	C:Excessive alcohol	--	-27	-25	--	16
CE-11.	C:Abnormal before illness	68	--	--	--	56
CE-12.	C:Badly organized personality	75	--	-33	--	100
CE-13.	C:Dependent personality	54	--	--	--	53
CE-14.	C:Little energy	--	--	-61	--	82
CE-15.	C:Cyclothymic	62	34	--	--	45
CE-16.	C:Schizoid	58	--	--	--	42
CE-17.	C:Hypochondriacal personality	--	44	-31	--	32
CE-18.	C:Obsessional	31	--	32	--	32
CE-19.	C:Somatic anxiety	--	41	--	--	21
CE-20.	C:Effort intolerance	--	73	--	--	54
CE-21.	C:Dyspepsia, vomiting	28	49	--	--	45
CE-22.	C:Fainting, fits	--	49	--	25	33
CE-23.	C:Pain without cause	--	38	--	--	13
CE-24.	C:Tremor	39	--	--	--	25
CE-25.	C:Sexual anomalies	--	-48[2]	--	36	56
CE-26.	C:Irritability	--	--	--	-36	23
CE-27.	C:Apatny	--	--	-34	-66	47
CE-28.	C:Hysterical attitude	--	--	-30	--	32
CE-29.	C:Poor muscular tone	53	46	--	28	46
CE-30.	C:Headaches	--	--	--	-32	21
CE-31.	C:Anxiety, anxiety dreams	29	--	--	-59	59
CE-32.	C:Depression	--	--	--	-57	42
CE-33.	C:Hypochondriasis	--	86	-31	28	82
CE-34.	C:Hysterical conversion	--	--	--	48	44
CE-35.	C:Stress of bombardment	--	--	--	--	01
CE-36.	C:Stress of army life	55	--	--	--	38
CE-37.	C:Stress of domestic problems	--	--	--	--	11
CE-38.	C:Low intelligence	--	--	-32	--	19
CE-39.	C:Boarded out of the army	45	--	--	--	35

[1] Possibly a combination of Su and Hy.

[2] Sign probably in error: see Analysis Ey.

CE

INTERCORRELATIONS OF FACTORS

	I	II	III	IV
I		28	-26	19
II	28		12	09
III	-26	12		-46
IV	19	09	-46	

ANALYSIS Ch

Carlson, H. B. Attitudes of Undergraduate Students. J. soc. Psychol., 1934, 5, 202-212.

The subjects were seniors of the class of 1932 at the University of Chicago. 500 attitude scales were distributed and complete records were obtained for 215. The attitude scores used were those on L. L. Thurstone's attitude scales. Each scale consists of 20 or 22 statements which express gradations of thought and feeling from one extreme to another. Each statement has a scale value determined by its average placement on an 11-point scale by judges. The subject was asked to put a check mark if he agreed with the statement, to put a cross if he disagreed with the statement, and to put a question mark if he could not decide about any particular statement. A subject's score was the median scale value of all the statements that he endorsed. One orthogonal rotation was made.

The variables consist of the attitude scales named in the table (a favorable attitude toward the concept named is scored positively) and the Chicago entrance psychological examination which had been taken by 100 of the subjects.

LOADINGS ON ORTHOGONAL FACTORS

I. Intelligence
II. Radical-conservative
III. Religious

	Identifications:	G	?[1]	Re	
No.	Variable	I	II	III	h^2
Ch-1.	T:Intelligence	59	--	--	32
Ch-2.	J:Communism	53	53	--	38
Ch-3.	J:God	-29	-42	35	40
Ch-4.	J:Pacifism	62	--	--	56
Ch-5.	J:Birth Control	33	--	-34	25
Ch-6.	J:Prohibition	--	-56	--	34

[1] Radical vs. Conservative

ANALYSIS CM

Cattell, R. B., and Miller, A. A confirmation of the ergic and self-sentiment patterns among dynamic traits (attitude variables) by R-technique. *Brit. J. Psychol.*, 1952, *43*, 280-294.

The subjects were 73 undergraduate men.

The analysis is comparable to *Analysis CaF* in its general method. It uses the *Preference Method* and the *Information Method* of measurement described there, and, instead of the *Psychogalvanic Reflex Method* it uses the *Fluency Method*. In this situation the subject was given the sentence defining the attitude and asked to write as many justifications for the attitude (including further satisfactions to which it would lead) as possible in each of two 1-minute periods. The total number of ideas per attitude was ipsatively scored to cancel individual differences in total fluency. Where the correlations between the three measurements of each attitude were unsatisfactory (insignificant or negative) the score was based on the Preference test alone. This occurred for variables 5, 8, 10, 15, 16, 21, 26, and 29.

The variables used in this study are the ones with the best loadings on each of the factors found in *Analysis CaF*, plus variables that were devised to fit the interpretation of each of those factors best. The following are variables that were not used in *Analysis CaF*. The *CaF* numbers for the others are given in the table of loadings.

CM- 4. I want to help the distressed wherever they are.
CM- 7. I like sex appeal in a woman.
CM-10. I would rather spend free time with people than by myself.
CM-13. I like to know a sure place to turn for help when difficulties become too overwhelming.
CM-17. I would like to satisfy my curiosity about everything around.
CM-20. I want to see the danger of death by accidents and disease reduced.
CM-23. I like to enjoy the luxury of my bath at leisure.
CM-24. I want more time to enjoy my own company, my own thoughts and reveries.
CM-27. I like to keep good control over my mental processes, e.g. memory.
CM-30. I like to have command of people.

LOADINGS ON OBLIQUE FACTORS[1]

1. Gregariousness
2. Self-assertion
3. Curiosity
4. Mating
5. Escape
6. Super-ego?
7. Appeal
8. Parental protectiveness
9. Self-sentiment

	Identifications:		Ia?	Ib	Cv	Ix	Fe	?	Ir	If	Sc?
No.	Variable[2]		1	2	-3	4	5	6	7	8	-9
CM- 1.	X:Live in America	CaF-42	--	--	--	--	29	--	-31	--	--
CM- 2.	X:Educate children	CaF-50	--	--	--	--	--	-40	--	40	--
CM- 3.	X:Protect parents	CaF-43	--	--	--	--	--	--	--	51	--
CM- 4.	X:Help distressed		-51	-51	--	--	--	--	--	--	--
CM- 5.	X:Likes movies	CaF-30	32	--	-35	--	--	--	--	50	--
CM- 6.	X:Wants to make love	CaF-31	--	--	--	42	--	-32	--	45	--
CM- 7.	X:Likes sex appeal		--	-27	--	49	--	-42	--	--	--
CM- 8.	X:Likes athletics	CaF- 1	49	--	--	--	-25	--	--	--	--
CM- 9.	X:Likes football	CaF-22	48	--	--	--	--	--	--	--	--
CM-10.	X:Free time with people		30	--	--	--	--	28	-28	--	--
CM-11.	X:In touch with God	CaF-44	--	--	28	-29	--	--	53	--	--
CM-12.	X:Wants parents' advice	CaF- 5	--	-25	--	--	--	--	47	-44	--
CM-13.	X:Needs refuge		--	--	--	--	--	--	--	--	-32
CM-14.	X:Stronger religion	CaF-19	--	--	--	--	--	32	26	-37	--
CM-15.	X:Likes music	CaF-11	--	--	-52	--	--	25	--	27	--
CM-16.	X:Learn more science	CaF-16	-31	--	-33	--	--	--	--	--	--
CM-17.	X:Satisfy curiosity		--	--	-50	--	--	--	--	--	29
CM-18.	X:Protection from bomb	CaF- 2	--	--	--	--	49	--	28	--	--
CM-19.	X:Attack any enemy	CaF- 9	--	--	--	-27	45	26	--	--	45
CM-20.	X:Reduce danger		-27	--	--	27	35	--	--	--	--
CM-21.	X:More drinks and smokes	CaF-49	--	--	--	36	--	--	--	52	--
CM-22.	X:More food and candy	CaF-45	--	--	--	37	-31	--	-35	--	--
CM-23.	X:Enjoys bath		27	--	--	--	--	--	--	--	--
CM-24.	X:Enjoys own reveries		--	--	--	--	-28	--	--	37	--
CM-25.	X:Protect self respect	CaF-13	33	--	--	--	--	--	-29	30	--
CM-26.	X:Advance in profession	CaF-28	--	72	--	--	--	29	--	--	--
CM-27.	X:Control over memory		-49	--	--	--	--	--	--	--	-60
CM-28.	X:Increase salary	CaF-18	-41	47	--	-26	--	--	--	--	--
CM-29.	X:Proficient in career	CaF- 6	--	59	--	--	27	36	--	--	-29
CM-30.	X:Command people		--	--	--	--	--	--	--	-31	--

---

[1] Communalities not given in article.

[2] The variables combine item types.

CM

INTERCORRELATIONS OF THE FACTORS

	1	2	3	4	5	6	7	8	9
1		48	30	-31	19	23	-07	-06	-13
2	48		31	-43	14	25	-17	09	13
3	30	31		-33	22	32	28	-08	35
4	-31	-43	-33		-07	-40	16	01	-07
5	19	14	22	-07		01	14	05	-44
6	23	25	32	-40	01		-05	-13	-24
7	-07	-17	28	16	14	-05		-18	-22
8	-06	09	-08	01	05	-13	-18		01
9	-13	13	35	-07	-44	-24	-22	01	

ANALYSIS Co

Cottle, W. C. A factorial study of the Multiphasic, Strong, Kuder, and Bell inventories using a population of adult males. *Psychometrika*, 1950, *15*, 25-47.

The subjects were 400 male veterans of World War II who were referred for testing and counseling at the Psychological Services Center of Syracuse University under the Veterans testing program. They seemed to be a fairly normal sample of college men.

Minnesota Multiphasic Personality inventory. 564 items of the questionnaire type are written on individual cards. The subject sorts the cards into piles representing the responses "Yes," "?," and "No." Cases with more than 20 responses of "?" or with raw scores greater than 9 on the lie scale (L) or validity scale (F) were eliminated from the sample.

Co- 1. *L, Lie Factor*. Amount of falsification of scores made by choosing the most socially accepted responses. It reveals exaggeration or misrepresentation.

Co- 2. *F, Validity*. Check on validity of test-rationale. Scores are high if scoring is careless or if the subject is careless, fails to follow directions or for any reason makes responses that are not pertinent.

K Scale. (Included here for purposes of completion only. See *WL2*) This is a correction factor found to be of value in sharpening the discriminatory power of the clinical variables. Persons who are motivated toward getting "good" scores (defensiveness) will tend toward higher scores on K, and those desiring "poor" scores (plus-getting) will obtain lower values.

Co- 3. *Hs, Hypochondriasis*. Amount of abnormal concern about bodily functions, concern about health, tendency toward physical complaint.

Co- 4. *D, Depression*. Depth of clinically recognized symptom complex, depression in terms of poor morale of the emotional type with a feeling of uselessness and inability to assume a normal optimism with regard to the future. Dejection despondency.

Co- 5. *Hy, Hysteria*. The degree to which the subject is like patients who have developed conversion-type hysterical symptoms like systematic or specific complaints. Immature, unrealistic, amenable to group ideas, kindly, courteous, naive, needs social acceptance.

Co- 6. *Pd, Psychopathic Deviate*. Absence of deep emotional response, inability to profit from experience, and disregard of social mores. Irresponsible, impulsive, egocentric, defiant, asocial, individualistic.

Co- 7. *Mf, Masculinity-Femininity*. Tendency toward feminine interests.

Co- 8. *Pa, Paranoia*. Tendency toward suspiciousness, over-sensitivity, delusions of persecution. Aggressive, critical, irritable, moody, sensitive to criticism.

Co- 9. Pt, Psychasthenia. Tendency to be troubled by phobias or compulsive behavior. Apprehensive, tense, hesitant, insecure, self-conscious, feelings of inadequacy.

Co-10. Sc, Schizophrenia. Tendency to be characterized by bizarre and unusual thoughts or behavior such as a splitting of the subjective life of the schizophrenic person from reality so that the observer cannot rationally follow the shifts in mood and behavior. Bashful, withdrawn, oversensitive, secretive, cautious.

Co-11. Ma, Hypomania. Marked over-productivity in thought and action, undertaking too many things, too active, too enthusiastic. Confident, hypersensitive, not persistent, aggressive, charming, expansive.

Social Scales: See Analysis Ty.

Strong Vocational Interest Blank for Men. See Analysis Sg.

Co-12. I, Scientific. Representative of interests of artist, psychologist, architect, physician, dentist.

Co-13. II, Technical. Representative of interests of mathematician, engineer, chemist, physicist.

Co-14. V, Social Welfare. Representative of interests of YMCA physical director and secretary, personnel manager, social science teacher, city school superintendent, minister.

Co-15. VIII, Business Detail. Representative of interests of accountant, office worker, purchasing agent, banker.

Co-16. IX, Business Contact. Representative of interests of sales manager, realtor, life insurance salesman.

Co-17. X, Linguistic. Representative of interests of advertising man, lawyer, author-journalist.

Co-18. IM, Interest Maturity. Difference in interest with age as associated with various occupational interests.

Co-19. OL, Occupational Level. Interest consistent with varying levels of aspiration or occupations.

Co-20. MF, Masculinity-Femininity. Interest in things and objects vs. people and ideas.

Kuder Preference Record. This is an inventory having 168 items. Each item consists of the name or short description of three, usually related, activities. The subject indicates by punching a hole with a stylus which of the three activities he likes most, and which he likes least. The stylus makes a hole through sheets such that the score for each of the scales below is obtained by counting the punctures that occur in printed circles.

Co-21. M, Mechanical. Degree of interest in mechanical activities.

Co-22. C, Computational. Degree of interest in computational activities.

Co-23. S, Scientific. Degree of interest in scientific activities.

Co-24. P, Persuasive. Degree of interest in persuasive activities (business contact).

Co-25. A, Artistic. Degree of interest in artistic activities.

Co-26. L, Literary. Degree of interest in literary activities.

Co-27. M, Musical. Degree of interest in musical activities.

Co-28. SS, Social Service. Degree of interest in social service activities.

Co-29. Cl, Clerical. Degree of interest in clerical activities.

Co-30. Mf, Masculinity-Femininity. Greatest differentiation of the two sexes, computed according to the procedure given in Kuder's revised manual, 1946.

Bell Adjustment Inventory, student form. This is a 140-item Yes-?-No questionnaire, with items asking about habits, feelings, attitudes, etc. relevant to the categories below. Scoring is done by placing over the responses tracing paper sheets on which are indicated the response positions for each scale. One point is given for each response coinciding with the key.

Co-31. Ho, Home. High scores indicate unsatisfactory home adjustment.

Co-32. He, Health. High scores indicate unsatisfactory health adjustment.

Co-33. So, Social. High scores indicate persons submissive and retiring in social contact.

Co-34. Em, Emotional. High scores indicate individuals who tend to be unstable emotionally.

Co

LOADINGS ON OBLIQUE FACTORS

A. Verbalization, communication or "people."
B. Expression of more serious maladjusted tendencies.
C. Interest in routine activities vs. those of a varied nature.
D. Hypochondriasis or neurotic tendencies.
E. Residual.
F. Liking for contact with people vs. scientific activities.
G. Esteem of leadership.
H. Preference for "social welfare" activities.

No.	Identifications: Variable	Mf A	Pc B	Ic C	E D	? E	Is -F	Ib G	Iw H	h^2
MMPI										
Co- 1.	T:Lie	--	-45	--	26	--	--	--	--	25
Co- 2.	T:Validity	--	55	--	--	--	--	--	--	44
Co- 3.	Q:Hypochondriasis	--	36	--	61	--	--	--	--	77
Co- 4.	Q:Depression	--	--	--	51	--	--	--	--	57
Co- 5.	Q:Hysteria	--	--	--	70	--	--	--	--	55
Co- 6.	Q:Psychopathic Deviate	--	51	--	--	--	--	--	--	45
Co- 7.	I:Femininity	--	28	--	--	33	--	--	--	42
Co- 8.	Q:Paranoia	--	31	--	--	--	--	--	--	27
Co- 9.	Q:Psychasthenia	--	76	--	--	--	--	--	--	85
Co-10.	Q:Schizophrenia	--	83	--	--	--	--	--	--	83
Co-11.	Q:Hypomania	--	56	--	--	--	--	--	--	40
STRONG										
Co-12.	I:Scientific	--	--	-38	--	--	62	--	-29	91
Co-13.	I:Technical	44	--	--	--	--	67	--	--	82
Co-14.	I:Social Welfare	-28	--	-30	--	--	--	-26	60	81
Co-15.	I:Business Detail	--	--	67	--	--	-48	--	--	80
Co-16.	I:Business Contact	-30	--	--	--	--	-77	38	--	98
Co-17.	I:Linguistic	-50	--	--	--	--	--	42	--	76
Co-18.	I:Interest Maturity	--	--	--	--	--	--	--	68	57
Co-19.	I:Occupational Level	--	--	--	--	--	--	76	--	63
Co-20.	I:Masculinity	69	--	--	--	--	--	--	--	79
KUDER										
Co-21.	I:Mechanical	68	--	--	--	--	--	-33	-36	98
Co-22.	I:Computational	--	--	69	--	--	--	--	--	58
Co-23.	I:Scientific	56	--	--	--	--	62	--	--	71
Co-24.	I:Persuasive	--	--	--	--	--	-74	--	--	74
Co-25.	I:Artistic	--	--	-32	--	--	--	-29	-52	50
Co-26.	I:Literary	-35	--	--	--	29	--	--	--	35
Co-27.	I:Musical	-46	--	--	--	--	--	--	--	34
Co-28.	I:Social Service	--	--	-40	--	--	--	--	--	33
Co-29.	I:Clerical	-31	--	77	--	--	-25	--	--	71
Co-30.	I:Masculinity-Femininity	82	--	--	--	41	--	--	--	91
BELL										
Co-31.	Q:Home	--	60	--	--	--	--	--	--	41
Co-32.	Q:Health	--	37	--	37	--	--	--	--	49
Co-33.	Q:Social	--	33	--	--	--	--	--	-40	51
Co-34.	Q:Emotional	--	67	--	--	--	--	--	--	49

Co

INTERCORRELATIONS OF FACTORS

	A	B	C	D	E	F	G	H
A		-.17	.15	-.04	-.17	.15	-.21	-.09
B	-.17		.04	.30	.09	.00	-.13	-.15
C	.15	.04		.09	-.07	.04	-.19	.07
D	-.04	.30	.09		-.22	.06	.02	-.07
E	-.17	.09	-.07	-.22		-.28	-.00	-.26
F	.15	.00	.04	.06	-.28		.03	.28
G	-.21	-.13	-.19	.02	-.00	.03		-.09
H	-.09	-.15	.07	-.07	-.26	.28	-.09	

ANALYSIS CP

Carter, H. D., Pyles, M. K., and Bretnall, E. P. A comparative study of factors in vocational interest scores of high school boys. *J. educ. Psychol.*, 1935, *26*, 81-98.

The subjects were 133 high school boys ranging in age from 12 to 20. They were given the Strong Vocational Interest Blank which is designed for older persons (see *Analysis Sg*).

Two analyses were made using Thurstone's simplified method. No rotation of axes is necessary for this method. Only the first analysis, which used 23 vocational scores and age, is reported here. The second analysis used only the 18 vocational scores used by Thurstone. In both analyses four factors were extracted and were found to be closely similar. A table showing the correlation of the ranks of the loadings on each factor indicates a considerable degree of agreement between these analyses and that of Thurstone.

LOADINGS ON ORTHOGONAL FACTORS

The factors are not named.

	Identifications:	?[1]	Is	Ip?	Ib	
No.	Variable	1	-2	3	4	h^2
CP- 1.	I:Advertiser	-60	-71	--	--	93
CP- 2.	I:Architect	-64	52	--	--	70
CP- 3.	I:Artist	-87	--	--	--	83
CP- 4.	I:C.P.A.	--	-37	--	65	57
CP- 5.	I:Chemist	-30	87	--	--	85
CP- 6.	I:Physician	-86	--	--	--	78
CP- 7.	I:Engineer	-62	67	-35	--	97
CP- 8.	I:Farmer	-32	64	--	-28	62
CP- 9.	I:Journalist	-72	-61	--	--	96
CP-10.	I:Lawyer	-61	-53	--	42	86
CP-11.	I:Life insurance salesman	32	-79	--	29	82
CP-12.	I:Minister	80	--	42	--	89
CP-13.	I:Personnel manager	83	37	--	--	89
CP-14.	I:Psychologist	-39	72	45	--	88
CP-15.	I:Purchasing agent	--	--	-69	30	60
CP-16.	I:Real estate salesman	-30	-79	-25	--	83
CP-17.	I:Schoolman	73	53	35	--	99
CP-18.	I:Vacuum cleaner salesman	94	--	--	--	90
CP-19.	I:Y.M.C.A. secretary	92	--	30	--	100
CP-20.	I:Office clerk	92	25	--	--	95
CP-21.	I:Physicist	-83	53	--	--	99
CP-22.	I:Mathematician	-77	47	--	--	85
CP-23.	I:City school superintendent	73	31	38	37	91
CP-24.	C:Chronological age	--	--	-29	--	16

[1] Combination of *Gs* and *Iw*.

ANALYSIS CSA

Cattell, R. B., and Saunders, D. R. Inter-relation and matching of personality factors from behavior rating, questionnaire, and objective test data. J. soc. Psychol., 1950, 31, 243-260.

This analysis used variables from Analyses CaB, CaC, CaD, and CaE to find out whether factors of similar psychological meaning found separately for different media will turn out to be in fact the same factors. This approach was possible, since these earlier analyses all made use of the same subjects, 404 college students, about two thirds women, at the University of Illinois, who were paid to be subjects. In the present analysis each factor found earlier is represented one or more times by combining the scores on variables having high loadings on it. Since all measures were not obtained for every subject, the correlations are based on varying sized groups. Tetrachoric correlations are used as this brought about desirable normalizing.

The list of variables indicates the factor being represented, with Cattell's code numbers, the number of cases, and the variables from the earlier analyses that were combined. (The variable numbers are those used in this book. These are different variable numbers from those used by Cattell for Analyses CaD and CaE.)

Since the variables are too complex to be indicated in the table of loadings, the factor or factors which they represent is indicated by this book's identification of it.

CSA- 1. Cyclothymia vs. Schizothymia, BR-A (358 cases)
Analysis CaB, Factor 5 and Analysis CaC, Factor 2: 1, 12, 15, 7.

CSA- 2. Infantile Sthenic Emotionality vs. Phlegmatic Frustration Tolerance, BR-D (358 cases)
Analysis CaC, Factor 11: 24, 3

CSA- 3. Infantile, Sthenic Emotionality vs. Phlegmatic Frustration Tolerance, BR-D (358 cases)
Analysis CaC, Factor 11: -15, -27

CSA- 4. Dominance vs. Submissiveness, BR-E (358 cases)
Analysis CaB, Factor 1: 4, -35, 5, and Analysis CaC, Factor 4: -8, 4, 5

CSA- 5. Surgency vs. Desurgency, BR-F (358 cases)
Analysis CaB, Factor 4 and Analysis CaC, Factor 5: -9, -5, -18, -16

CSA- 6. Sensitive, Imaginative Emotionality vs. Rigid Mature Poise, BR-I (358 cases)
Analysis CaB, Factor 8: 24, 35, 31, 6, 29

CSA- 7. Neurasthenia vs. Vigorous "Obsessional Determined" Character, BR-J (358 cases)
Analysis CaB, Factor 9: -13, -4, 8, -10, 30

CSA

CSA- 8. Paranoid Schizothymia vs. Sensitive Trustful Accessibility, BR-L (358 cases)
Analysis CaB, Factor 11: 22, 26, -28, 11

CSA- 9. Emotionally Mature Stable Character vs. Demoralized General Emotionality, BR-C (358 cases)
Analysis CaC, Factor 1: -30, 13, 2

CSA-10. Positive Character Integration vs. Immature Dependent Character, BR-C (358 cases)
Analysis CaB, Factor 2 and Analysis CaC, Factor 3: 17, 2, -6

CSA-11. Charitable Adventurous Cyclothymia vs. Withdrawn Heboid Schizothymia, BR-H (358 cases)
Analysis CaB, Factor 3, and Analysis CaC, Factor 7: 28

CSA-12. Charitable, Adventurous Cyclothymia vs. Withdrawn Heboid Schizothymia, BR-H (358 cases)
Analysis CaB, Factor 3, and Analysis CaC, Factor 7: 34, 32

CSA-13. Charitable, Adventurous Cyclothymia vs. Withdrawn Heboid Schizothymia, BR-H (358 cases)
Analysis CaB, Factor 3, and Analysis CaC, Factor 7: 34, 32, 28.
In the process of factor extraction this variable was not used in any of the groups, since it overlaps with CSA-11 and CSA-12.

CSA-14. Trained, Socialized, Cultured Mind vs. Boorishness, BR-K (358 cases)
Analysis CaB, Factor 6, and Analysis CaC, Factor 6: -10, 21, 29

CSA-15. Spiessburger Concernedness vs. Bohemian Intellectualism, BR-M (358 cases)
Analysis CaB, Factor 10, and Analysis CaC, Factor 10: -25, -29, -25

CSA-16. Genteel Sophistication vs. Rough Simplicity, BR-N (358 cases)
Analysis CaC, Factor 8: 21, -7, 31

CSA-17. Anxiety Depression (General Neuroticism), QP-IV (404 cases)
Analysis CaE, Factor 1: 8

CSA-18. Shyness, QP-I (404 cases)
Analysis CaE, Factor 2: 1

CSA-19. Interest in Understanding Nature, QI-II (404 cases)
Analysis CaE, Factor 3: 47

CSA-20. Conventional Unimaginative Annoyance at Superiority (404 cases)
Analysis CaE, Factor 17: -74

CSA

CSA-21. Social Poise and Belief in Coercion vs. Schizoid Personal Liberty and Autism (404 cases)
Analysis CaE, Factor 9: 38

CSA-22. "Radicalism" and Liking Thinking, QP-XVII and QA-I (404 cases)
Analysis CaE, Factor 4: 66

CSA-23. Obsessionally Careful and Considerate, QP-X (404 cases)
Analysis CaE, Factor 13: 24

CSA-24. Hysteroid Aggressiveness (404 cases)
Analysis CaE, Factor 14: 42

CSA-25. Relaxed Independence or Rhathymia, QP-XI and QI-III (?) (404 cases)
Analysis CaE, Factor 10: -27, -28, 51, 56, 79

CSA-26. Emotionally Sensitive Self-sufficiency vs. Gregariousness (404 cases)
Analysis CaE, Factor 5: 3, 27, 51, -53, 76

CSA-27. Will Control and Character Stability, QP-IX (404 cases)
Analysis CaE, Factor 8: -5, -23, -32, 34, -25

CSA-28. Hard-headed Rationalism and Intellectual Leadership (404 cases)
Analysis CaE, Factor 6: -37, 53, -67, (21, 12)

CSA-29. Independent Adventurous Self-sufficiency (404 cases)
Analysis CaE, Factor 7: -14, 17, 21, 61, (20)

CSA-30. Interest in Guiding People vs. Objective Interests (404 cases)
Analysis CaE, Factor 15: -10, 1, 51, -52, 78

CSA-31. This factor cannot be matched by any of those reported in Analysis CaE, (404 cases) 11, 12, -15, -64, 69

CSA-32. Masculinity vs. Femininity, very poorly matched in Analysis CaE (404 cases)
Analysis CaE, Factor 12: 39, 41, 28, -60, 79

The factors reported in Analysis CaD were not given any descriptive titles or other identifying labels.

CSA-33. Analysis CaD, Factor 4: 19, 6 (307 cases)

CSA-34. Analysis CaD, Factor 4: -9, -29 (301 cases)

CSA-35. Analysis CaD, Factor 5: -23, -10 (77 cases)

CSA-36. Analysis CaD, Factor 5: 28, 24 (100 cases)

CSA-37. Analysis CaD, Factor 10: 26, 2 (141 cases)

CSA

CSA-38. *Analysis CaD*, Factor 11: 5, -38 (303 cases)

CSA-39. *Analysis CaD*, Factor 2: 17, 33 (90 cases)

CSA-40. *Analysis CaD*, Factor 2: 37, -7 (96 cases)

CSA-41. *Analysis CaD*, Factor 1: 21, 9 (296 cases)

CSA-42. *Analysis CaD*, Factor 3: -42, 14 (100 cases)

CSA-43. *Analysis CaD*, Factor 6: 47, 40; 3 (305 cases)

CSA-44. *Analysis CaD*, Factor 7: 38, -20, 34 (145 cases)

CSA-45. *Analysis CaD*, Factor 8: -48, 14, 34, -25 (174 cases)

CSA-46. *Analysis CaD*, Factor 9: 4, -22, -9 (129 cases)

CSA-47. Masculinity of sex (307 cases used).

CSA

LOADINGS ON OBLIQUE FACTORS

1. Will Control and Character Stability	7. Femininity and Sophistication
2. Quickness and Impressionableness	8. Positive Character Integration vs. Immature Dependent Character
3. Trustful Cyclothymia vs. Paranoid Schizoid	9. Emotionally Mature Character vs. General Emotionality
4. Adventurous Cyclothymia and Surgency	10. Sensitive, Imaginative Emotionality vs. Poise
5. Dominance	11. Immature Impatience
6. Bohemian Intellectualism	12. Hard-headed Rationalism and Intellectual Leadership

No.	Identifications: Factor	? 1	G? 2	RT?[1] 3	?[2] 4	Do? 5	Cv? 6	Mf -7	Pe? 8	E? -9	Se? 10	Wi? 11	? 12	h^2
CSA- 1.	R:A, A	--	--	--	-34	-76	--	-33	--	-73	--	--	--	190
CSA- 2.	R:Ei	--	--	--	72	58	--	--	--	55	--	--	29	102
CSA- 3.	R:Ei	--	--	--	66	49	--	--	--	59	--	--	--	102
CSA- 4.	R:Do?, ?	--	--	--	--	81	--	--	--	--	--	--	27	93
CSA- 5.	R:Su, Su	--	--	--	64	-27	--	--	--	--	--	--	--	92
CSA- 6.	R:Se, Ei?	--	--	--	33	--	--	-32	--	49	43	--	--	72
CSA- 7.	R:?	--	--	--	--	-32	--	--	--	--	--	-25	--	136
CSA- 8.	R:?	--	--	-41	-27	54	--	--	--	36	--	--	29	79
CSA- 9.	R:-E	25	--	--	-63	--	--	--	--	-76	--	--	29	104
CSA-10.	R:Pe, Pe	--	--	--	-40	--	--	--	66	-50	-41	--	--	104
CSA-11.	R:So?, So?	--	--	--	66	--	--	-49	--	--	-29	--	--	115
CSA-12.	R:So?, So?	--	--	--	73	--	--	--	--	--	--	--	--	89
CSA-13.	R:So?, So?	--	--	--	77	--	--	-27	--	--	--	--	--	89
CSA-14.	R:Cu, Cu	--	--	--	--	--	--	-82	50	-39	--	--	--	157
CSA-15.	R:Cv, Cv	--	--	--	-32	--	39	--	--	--	--	-31	--	60
CSA-16.	R:Sf	--	--	--	--	35	--	-72	39	--	34	--	38	118
CSA-17.	Q:Cd-Lo-Au?; Lonely	--	--	--	--	--	--	--	--	--	--	--	61	74
CSA-18.	Q:-So; Shyness	--	--	--	-52	--	--	--	--	-35	--	--	26	50
CSA-19.	I:Is; Artist vs. YMCA	--	--	--	--	--	-26	44	--	--	38	--	--	129
CSA-20.	I:?;dislikes poetry	-34	--	42	--	--	46	--	-36	--	--	--	--	67
CSA-21.	Q:?;likes service	--	--	--	--	--	--	-36	--	--	--	--	--	34
CSA-22.	J:-Re; evolution vs. God	--	-26	29	--	--	--	--	--	--	--	--	--	30
CSA-23.	Q:Sf?; correct manners	--	--	--	--	--	74	--	76	37	--	--	--	163
CSA-24.	Q:?; sleep walker	--	-28	--	--	--	--	--	--	26	--	--	33	55
CSA-25.	-:-Pe?	--	--	--	40	--	--	--	--	--	--	--	--	49
CSA-26.	-:Se?	--	--	--	--	--	--	-33	--	--	39	-50	-28	99
CSA-27.	Q:-Ne	42	--	--	--	--	--	--	--	--	--	--	--	40
CSA-28.	-:-G?	--	-63	--	--	--	--	--	32	--	--	--	70	91
CSA-29.	-:Ss	--	--	--	--	--	--	--	--	--	--	--	-30	66
CSA-30.	-:?	--	--	--	-36	-32	37	--	--	--	--	--	--	45
CSA-31.	-:-	--	--	--	--	--	--	41	--	--	--	--	33	63
CSA-32.	-:?	--	--	--	--	--	--	--	--	--	--	--	--	23
CSA-33.	T:A[illegible]	--	43	--	--	--	--	--	--	--	--	--	--	43
CSA-34.	T:[illegible]	--	--	--	--	--	--	46	--	--	--	--	--	84
CSA-35.	T:Pe?	--	27	--	--	--	--	--	--	-35	--	--	--	44
CSA-36.	T:Pe?	--	--	-35	--	--	--	--	37	--	--	--	-49	140
CSA-37.	T:E?	--	--	--	25	--	--	--	--	47	--	--	--	167
CSA-38.	T:?	--	--	--	--	--	--	--	--	--	--	--	40	30
CSA-39.	-:?	65	--	--	--	75	--	59	30	--	--	--	--	299
CSA-40.	-:?	83	--	--	42	--	--	--	-34	--	36	--	--	179
CSA-41.	T:?	-35	--	--	--	--	--	--	--	--	-26	-44	--	55
CSA-42.	T:-Wi?[3]	--	--	--	--	--	--	89[2]	--	--	--	-66[2]	--	161
CSA-43.	T:G	36	71	--	--	--	--	44	--	--	--	--	--	104
CSA-44.	T:?	--	-44	--	--	--	-42	51	--	--	--	--	--	77
CSA-45.	T:?	--	--	--	--	--	-28	25	--	--	-39	-43	--	39
CSA-46.	-:-RT?	--	--	-85	--	--	--	--	--	--	--	--	--	81
CSA-47.	C:male sex	--	-25	--	--	--	--	114	--	--	-27	--	--	425

---

[1] Reaction Time, See Psychometric Monograph No. 5

[2] Possibly a combination of So and Ei

[3] An inconsistency in the article raises doubt about the direction of this variable.

CSA

DIRECTION COSINES OF ROTATED FACTORS

	1	2	3	4	5	6	7	8	9	10	11	12
1		21	-08	11	19	11	-37	-09	03	20	34	-01
2	21		-16	-13	-21	00	-04	-18	16	23	17	-36
3	-08	-16		07	-06	-29	-08	-16	01	06	01	07
4	11	-13	07		16	-03	04	09	-48	10	-02	01
5	19	-21	-06	16		-01	01	16	-34	-08	-13	47
6	11	00	-29	-03	-01		-29	-19	43	-22	-05	04
7	-37	-04	-08	04	01	-29		39	03	18	10	-01
8	-09	-18	-16	09	16	-19	39		-05	-07	-15	10
9	03	16	01	-48	-34	43	03	-05		-20	-08	05
10	20	23	06	10	-08	-22	18	-07	-20		19	13
11	34	17	01	-02	-13	-05	10	-15	-08	19		03
12	-01	-36	07	01	47	04	-01	10	05	13	03	

ANALYSIS CT

Cattell, R. B., and Tiner, L. G. The varieties of structural rigidity. J. Personality, 1949, 17, 321-341.

The subjects were 100 male college students.

CT- 1. Weigl Figures. The test consisted of 5 plates as used in an earlier research. Each could be seen as a face both when held right side up and when reversed. The subject was asked to say if he could see the faces and to describe them. Scoring was in terms of whether or not the subject saw the face both right side up and upside down. Low scores would be indicative of high rigidity.

CT- 2. Creative Effort Motor Perseveration Test. Four measures of the creative effort type found well saturated in a previous factorization were included in the battery. Total time was only 180 seconds. Each test was in the form of an old type of activity directly followed by a new type of activity. Each test was scored in terms of speed in the old activity divided by the new activity.

CT- 3. Imaginative "Synesthesia." The subject was presented with 12 outline drawings of abstract forms and a list of 12 "traits." He was required to match each trait with a drawing. Time: 2 minutes. The score was the number correctly matched. This is a new test, testing the hypothesis that the high "plasticity" and far-fetched imagination required to see some connection between the drawings would arise from low rigidity.

CT- 4. Gottschaldt's Figures. This was a page of 16 Gottschaldt figures. Four minutes was allowed for the test. The score was the number of larger, more complicated figures in which a smaller, simpler design was found and penciled in. It was thought that rigidity might have some influence in obstructing the perception of forms in the larger units.

CT- 5. The Necker Cube. The subject was told to fix his attention on the center of a fluctuating outline cube and to make a note of the number of times a shift in perspective occurred. The number of fluctuations constituted the score. This was included because it has been claimed, probably mistakenly, that inability to see rapid fluctuations is a measure of rigidity.

CT- 6. The Werner Tone Rhythm Series. The subject was presented with 12 series of long and short sounds. After each sound series he was asked to write down what he had heard. The test was scored in terms of the number of errors made. Fewer errors were indicative of low rigidity if it may be assumed, as Werner assumes, that these errors are of a perseverative nature.

CT- 7. Riddles. Eight riddles were selected on the basis of their having two possible solutions. One was of a serious and obvious nature, the other was a unique witty solution. Two minutes was taken for the test. The score was the total number of unique witty solutions given. The more rigid person would give the serious, obvious solution, and the less rigid person would give the unique witty answer.

CT- 8. Distraction Test. The subject was presented with a page of simple addition problems. He worked for 2 minutes in silence followed by a period of 2 minutes during which a loud and humorous distraction took place. After this he worked 2 minutes more in silence. The score was the average of the number of problems correctly done in the pre- and post-distraction periods as compared to the number of problems correctly done during the distraction period. More distracted persons therefore had higher scores. It is possible that persons low in rigidity are more distractible than more rigid persons.

CT- 9. Flicker Fusion. An instrument (Strobotac) was used which enabled the experimenter to regulate the frequency of flicker. The machine was started at the lowest frequency and gradually raised through 13 critical periods to the highest frequency (a). Then the reverse procedure was carried out starting at the highest frequency and going to the lowest (b). The entire procedure was then repeated to get measures (c) and (d). (a + c) and (b + d) were averaged and treated as one score. The test was scored in terms of the critical period at which the flicker disappeared and that at which the flicker reappeared. (High scores represent long period, low frequency.) This was inserted to answer the much debated question of whether the classical rigidity extends to perceptual activities.

CT-10. Fusion Lag. This test was derived directly from the experimental results of CT-9. It was assumed that the difference between part (a + b) and part (c + d) would give a measure of the lag in perceiving change in flicker which we have called Fusion Lag. This may be more readily understood by:

$$\frac{a + (b - 13)}{2} - \frac{c + (d - 13)}{2} = \text{Fusion Lag;}$$ (b and c should probably be interchanged)

CT-11. Fluency. Two drawings and 2 ink blots were presented to the subject. He was asked to list the number of things which could be lying at a certain place in the drawings. In the case of the ink blots he was asked what they suggested to him. The score was the number of responses given for each picture. Low fluency should produce more rigid behavior though it is itself not rigidity.

CT-12. Thurstone's Flag Test. The subject was presented with the first page of standard instructions and was then instructed to work on the last page of the test which had been reproduced in the test booklet. The number of flags marked correctly was the total score. It was included in this test battery in order to study the relationship of spatial ability to perseveration, fluency, and intelligence.

CT-13. Hidden Objects. The subject was presented with 2 pictures in which there were numerous hidden objects. The pictures were of the type found in children's magazines. The subject was instructed to find as many hidden objects as possible and to list them below the picture. The total number of legitimate hidden objects found was the correct score. It was supposed that more rigid persons would find fewer hidden objects.

CT-14. Hidden Word Test. The subject was presented with 12 ambiguous words. He was instructed to find only one 4- or 5-letter hidden word in each ambiguous word without transposing the letters. The first 3 words were worked out with the subject. In each case the hidden word was the name of an animal. The score was the total number of animal names found. This test was included in the battery as a measure of mental set in order better to understand what relationship it bears to perseveration. The set was established by working out 3 animal names hidden in words with the subject. Luchins, in designing the test, assumed that subjects who found animal names had established set, whereas those who were unable to find animal names did not establish set. We did not find it to work in this way, and it had to be scored simply as an anagrams test.

CT-15. Nonsense Syllables. The subject was instructed to make up as many completely meaningless, pronounceable, one syllable words as possible. The time allowed was 1 minute. The number of words fulfilling the above mentioned criteria was the total score. This is a newly invented test for this study. Although it clearly involves fluency, it also comes so near to what we have discussed as plasticity or low basic rigidity that it justifies inclusion.

CT-16. Clinical Test. The subject was presented with 3 printed designs and 3 envelopes containing squares to be used in constructing designs similar to the printed ones. In each case there were an insufficient number of squares with which to make up the design although they were so constructed that this was not readily apparent. The number of envelopes opened, and the number of moves made constituted 2 separate scores on the test. This test was designed to measure a "clinical type of perseveration." It was designed to measure the tendency to go on repeating an approach to a problem in spite of nonsolution.

CT-17. The Cattell Culture-Free Test of Intelligence. The following four parts of the test were administered:

Part I. Classifications (7 minutes)
Part IV. Matrices I: Four-Item Relational (4 minutes)
Part V. Matrices II: Nine-Item Relational (6 minutes)
Part VI. Matrices III: Nine-Item Cyclical (13 minutes)

Parts II and III were deleted for lack of time, and also the time limits for the four parts used were slightly shortened. The total time required for the test was 23 minutes plus time required for reading the directions. The majority of the subjects had no difficulty in finishing the test within the time limits. The standard directions and standard test booklet were used. The tests were scored in the standard manner. It was thought necessary to include a standardized intelligence test in the battery in order to find the relation of intelligence to perseveration.

CT

LOADINGS ON OBLIQUE FACTORS

1. Disposition Rigidity (Perseveration)
2. Spatial Intelligence, S
3. Ideational Inertia
4. Fluency of Association
5. residual

	Identifications:	?[2]	S[3]	?[4]	W?[5]	?	
No.	Variable[1]	-1	2	-3	4	5	h^2
CT- 1.	T:Weigl Figures-F	--	--	--	--	-42	23
CT- 2.	T:Motor Perseveration-R	-30	--	--	--	--	13
CT- 3.	T:Imaginative "Synesthesia"-F	--	--	--	--	--	08
CT- 4.	T:Gottschaldt's Figures-F	--	79[6]	--	--	--	64
CT- 5.	T:The Necker Cube-F	--	--	--	31	--	17
CT- 6.	T:Werner Tone Rhythm-R	--	--	-34	--	-32	23
CT- 7.	T:Riddles-F	--	--	41	--	--	20
CT- 8.	T:Distraction Test-F	57	--	--	--	--	38
CT- 9.	T:Flicker Fusion Period-R	-44	--	-41	34	--	39
CT-10.	T:Fusion Lag-R	--	--	-32	--	--	11
CT-11.	T:Fluency-F	--	--	--	33	--	21
CT-12.	T:Flag Test-F	--	69	--	--	--	54
CT-13.	T:Hidden Objects-F	66	--	29	--	--	56
CT-14.	T:Hidden Word Test-F	--	--	51	--	--	32
CT-15.	T:Nonsense Syllables-F	--	--	--	45	--	23
CT-16.	T:Clinical Test-R	--	--	--	--	54	33
CT-17.	T:Culture-Free Intelligence	--	33	--	27	--	25

[1] Following each variable, R means high score thought to indicate rigidity, F means high score thought to indicate flexibility.

[2] Flexibility vs. Rigidity

[3] Space, see Psychometric Monograph, No. 5

[4] Possibly a form of flexibility combined with Verbal Comprehension

[5] Possibly Word Fluency, see Psychometric Monograph, No. 5

[6] Sign changed after correspondence with the author

DIRECTION COSINES BETWEEN ROTATED VECTORS

	1	2	3	4	5
1		-08	16	21	11
2	-08		-04	-19	13
3	16	-04		21	-09
4	21	-19	21		13
5	11	13	-09	13	

ANALYSIS CW

Cook, E. B., and Wherry, R. J. A factor analysis of MMPI and aptitude test data. J. appl. Psychol., 1950, 34, 260-266.

The subjects were 111 naval enlisted submarine candidates. Three others had been eliminated, since their "Lie" score indicated that their MMPI scores would be invalid. The analysis used a modified Thurstone Group Centroid method.

Variables 1-11 were the scales of the short group form of the Minnesota Multiphasic Personality Inventory (see Analysis Co). The names of the scales appear in the table of loadings.

CW-12. Two-Hand Coordination Test. This was a motor pursuit task which had been employed frequently in the selection of military personnel. The essential psychological principle involved the carrying out of two coordinated movements simultaneously so that there was a conflict of attention. The subject was rated on his ability to manipulate hand cranks in such a way as to keep a small button in continuous contact with an irregularly moving disc. An electrically operated stop clock measured the total amount of time during which actual contact was maintained. Two 1-minute trials were used.

Variables 13-17 were the subtests of the Navy Basic Battery as follows:

CW-13. General Classification Test. Verbal abilities.

CW-14. Arithmetical Reasoning. Fractions, percentages, proportions.

CW-15. Mechanical Aptitude. Pictures applying simple principles of physics--levers, pulleys, braces, etc.

CW-16. Mechanical Knowledge. Picture identification tests.

CW-17. Electrical Knowledge. Picture identification tests.

CW-18. Tank Performance. Subjects were rated on a 5-point scale by a submarine medical officer for their over-all performance while undergoing routine training procedures at the Escape Training Tank. Subjects made two underwater ascents from each of the 12', 18' and 50' depths. They were rated on such items as evidence of apprehension, quickness of response to instructions, errors of position on the line, "freezing" on the line, fighting to get out of the water too quickly, and so forth.

Variables 19 and 20 were the two sections of the Navy Enlisted Personal Inventory. This consisted of form 2 of the Personal Inventory, a group test which presented a standardized psychiatric interview in pencil and paper form. The forced-choice type items which comprise the inventory were based on case history dissimilarities between psychiatrically undesirable and normal military personnel. Scores on the two sections (personal history and medical history) were treated as separate variables.

CW

LOADINGS ON ORTHOGONAL FACTORS

A. Tendency to Personality Maladjustment
B. Numerical-Verbal Intelligence
C. Tendency to Over-Activity
D. Tendency to Paranoia
E. Mechanical Coordination
F. Tendency to Femininity of Interest Pattern

No.	Identifications: Variable	?[1] A	Sg[2] B	Su C	Ho -D	ME E	Mf -F	h^2
MMPI								
CW- 1.	T:Lie	--	-26	-34	-67	--	--	67
CW- 2.	T:Validity	64	--	--	--	31	--	53
CW- 3.	Q:Hypochondriasis	79	--	--	--	--	--	72
CW- 4.	Q:Depression	28	--	-48	--	--	--	33
CW- 5.	Q:Hysteria	28	--	-43	-34	--	35	52
CW- 6.	Q:Psychopathic Deviate	33	--	-38	--	--	--	29
CW- 7.	I:Masculinity-Femininity	33	--	--	-38	--	-39	45
CW- 8.	Q:Paranoia	25	--	--	-48	--	--	34
CW- 9.	Q:Psychasthenia	72	--	--	--	--	-47	76
CW-10.	Q:Schizophrenia	93	--	--	--	--	--	98
CW-11.	Q:Hypomania	41	--	56	--	--	--	50
CW-12.	T:Two-Hand Coordination	--	--	--	--	36	--	17
CW-13.	T:General Classification	--	76	--	--	25	--	67
CW-14.	T:Arithmetical Reasoning	--	71	--	--	--	--	53
CW-15.	T:Mechanical Aptitude	--	--	34	--	43	41	56
CW-16.	T:Mechanical Knowledge	--	--	38	--	57	--	48
CW-17.	T:Electrical Knowledge	--	--	--	--	68	--	47
CW-18.	R:Tank Performance	--	--	--	--	--	--	06
CW-19.	C:Personal History	--	--	--	--	--	-40	24
CW-20.	C:Medical History	38	--	--	--	--	--	19

[1] Possibly a combination of P_c and *E*.

[2] *Schooling*, See *Sc* in *Psychometric Monograph, No. 5*.

ANALYSIS DT

Denton, J. C., and Taylor, C. W. A factor analysis of mental abilities and personality traits. Unpublished.

The subjects were 170 high-school seniors in Washington, D. C. Scores on variables 1-8 were normalized.

DT- 1. Memory. Combined scores on (a) First Names: recall first names paired with given last names, and (b) Word-Number: recall 2-digit numbers paired with given words.

DT- 2. Perceptual Speed. Identical Numbers: cross out numbers in a column which are the same as the one at the top.

DT- 3. Reasoning. Combined scores on (a) Letter Series: indicate which 2 letters come next in a series, (b) Letter Grouping: indicate which of 4 groups of letters is different from the other 3.

DT- 4. Number. Combined scores on (a) Addition: determine the correctness of an answer to a simple addition problem, (b) Multiplication: determine the correctness of a product of a two-digit and a one-digit number.

DT- 5. Verbal Comprehension. Combined scores on (a) Same or Opposite: select a word which means the same as, or opposite of, a given word, (b) Completion: select the first letter of a word that would complete a sentence.

DT- 6. Word Fluency. Combined scores on (a) First and Last Letters: write words that begin and end with given letters, (b) Suffixes: write words that have a given suffix.

DT- 7. Verbal Versatility. Combined scores on (a) Similies: write three ways in which a similie could be completed, (b) Letter Star: write a meaningful phrase or sentence that fits a given set of letters and stars, such as * Y * S. Each letter or star represents a word, which begins with the given letter or, in case of a star, with any letter.

DT- 8. Ideational Fluency. Combined scores on (a) Topics: write a phrase or sentence, regardless of quality, about a given topic, (b) Theme: write a theme about a given vague topic.

DT- 9 through 13. Guilford's factors S, T, D, C, and R. See Lo-1-5.

DT

LOADINGS ON OBLIQUE FACTORS

A. Number or speed
B. Memory
C. General mental ability
D. Depression
E. Surgency
F. Uninterpreted personality factor

No.	Identifications: Variable	?[1] A	M?[2] B	G? C	Cd? D	Rh?[3] E	? F	h^2
DT- 1.	T:Memory	--	49	--	--	--	--	35
DT- 2.	T:Perceptual Speed	40	--	--	--	--	--	34
DT- 3.	T:Reasoning	--	36	33	--	--	--	59
DT- 4.	T:Number	46	--	--	--	--	--	41
DT- 5.	T:Verbal Comprehension	--	--	57	--	--	--	53
DT- 6.	T:Word Fluency	--	--	31	--	--	--	31
DT- 7.	T:Verbal Versatility	--	--	61	--	29	--	56
DT- 8.	T:Ideational Fluency	--	--	57	--	--	28	52
DT- 9.	Q:Social Extraversion	--	--	--	-39	51	39	71
DT-10.	Q:Thinking Introversion	--	--	--	50	--	54	57
DT-11.	Q:Depression	--	--	--	94	--	--	96
DT-12.	Q:Cycloid Tendency	--	--	--	93	42	--	100
DT-13.	Q:Rhathymia	--	--	--	--	71	--	65

---

[1] Probably a combination of Number and Perceptual Speed, see Psychometric Monograph, No. 5.

[2] Memory, see Psychometric Monograph, No. 5.

[3] Variables 9 and 13 have gone together in Analyses Ls, No and ThB but with various other measures. Elements of Su and So are probably involved as well as Rh.

ANALYSIS Du

Duffy, E., Evaluative attitudes as related to vocational interests and academic achievement. _J. abn. & soc. Psychol._, 1940, _35_, 226-24

The subjects were 108 freshmen entering Sarah Lawrence College. The Allport-Vernon Study of Values, the Strong Vocational Interest Blank for Women, and the ACE Psychological Examination were given to the subjects. The correlations among these variables and course grades are discussed and cases of curvilinearity are demonstrated. The factor analysis was performed using the 6 scores of the Allport-Vernon only. Orthogonal rotation.

Part I of the Allport-Vernon Study of Values presents a number of controversial statements or questions involving the concepts listed below. The subject indicates his personal preference with regard to the answer to these questions by checking one of the 2 alternatives offered. Two levels of intensity of preference are scored. Part II presents sets of 4 completions to controversial questions. The subject indicates the order of his preference among the 4 completions. From the answers indicated a score is determined for each of the values listed below. The nature of the test is such that a high score for one value can be obtained only when some other value, or values, receives a correspondingly low score.

Du-1. Theoretical. Interest in the discovery of truth.

Du-2. Economic. Interest in the useful.

Du-3. Aesthetic. Interest in form and harmony.

Du-4. Social. Interest in and love of people.

Du-5. Political. Interest in power.

Du-6. Religious. Interest in a comprehension of, and unity with, the cosmos.

LOADINGS ON ORTHOGONAL FACTORS

I'. Philistine
II'. Interest in People
III'. Theoretical

No.	Identifications: Variable	Ib I'	Gs? II'	Is? III'	h^2
Du-1.	I:Theoretical	--	-38	55	45
Du-2.	I:Economic	64	--	--	44
Du-3.	I:Aesthetic	-40	--	--	22
Du-4.	I:Social	--	60	--	36
Du-5.	I:Political	65	--	-25	49
Du-6.	I:Religious	-51	--	-48	51

ANALYSIS Ey

Eysenck, H. J. Types of personality: a factorial study of seven hundred neurotics. J. ment. Sci., 1944, 90, 851-861.

The subjects were 700 male neurotic soldiers referred to Mill Hill Emergency Hospital for investigation and treatment, with organic illness cases not included. Correlations were Yule's coefficient of association based on dichotomized variables; they represent values about 30% larger than product-moment coefficients. Burt's Summation Method was used without rotation. See also Analysis CE.

In the list of variables below the numbers in parenthesis give the number of times the variable was noted in the group of 700.

Ey- 1. Age above 30 vs. age below 30. (270)

Ey- 2. Modal civil occupation: Unskilled and semiskilled vs. skilled, administrative, or professional. (538)

Ey- 3. Little and much unemployment vs. no unemployment. (294)

Ey- 4. Work history degraded, or unduly frequent changes of occupation vs. steady work history. (71)

Ey- 5. Abnormality in parents or siblings (psychosis, epilepsy, mental deficiency, neurosis or psychopathic personality) present vs. absent. (275)

Ey- 6. Home atmosphere during childhood and adolescence: unsatisfactory vs. satisfactory. (226)

Ey- 7. Married vs. engaged, single, widowed, separated. (463)

Ey- 8. Membership of political, social, cultural, industrial or other groups: nil vs. active or half-hearted. (574)

Ey- 9. Hobbies and interests: narrow vs. broad. (550)

Ey-10. Moderate or excessive alcohol vs. teetotal or abstemious. (377)

Ey-11. Mental health before present illness: symptoms in childhood, symptoms and behavior in adult life indicating clear predisposition, or definite illness vs. normal. (488)

Ey-12. Well-organized personality, adaptable, stable: No vs. Yes. (448)

Ey-13. Weak, dependent, timorous personality: somewhat or very vs. not. (393)

Ey-14. Drive and energy: inert, without initiative vs. average go or conspicuous energy. (505)

Ey

Ey-15. Cyclothymic or consistently depressive or hypomanic: somewhat or very vs. not. (265)

Ey-16. Schizoid, seclusive: somewhat or very vs. not. (235)

Ey-17. Hypochondriacal personality: somewhat or very vs. not. (220)

Ey-18. "Obsessional," meticulous: somewhat or very vs. not. (123)

Ey-19. Somatic anxiety (palpitations, dyspnoea, precordial discomfort, sweating, flushing, diarrhoea): Yes vs. no. (386)

Ey-20. Fatigue, lassitude, effort intolerance: Yes vs. no. (417)

Ey-21. Dyspepsia, vomiting: Yes vs. no. (122)

Ey-22. Fainting, fits: Yes vs. no. (101)

Ey-23. Pain--not of demonstrable organic origin and excluding headache: Yes vs. no. (174)

Ey-24. Tremor: Yes vs. no. (183)

Ey-25. Sexual anomalies (impotence, ejac. praecox, masturbation worries, homo-sexuality, others): Yes vs. no. (89)

Ey-26. Irritability: Yes vs. no. (164)

Ey-27. Apathy, retardation: Yes vs. no. (97)

Ey-28. Hysterical attitude to symptoms: Yes vs. no. (228)

Ey-29. Muscular tone and posture: Poor vs. good or average. (92)

Ey-30. Headaches: Mild or severe vs. none. (413)

Ey-31. Anxiety, anxiety dreams, battle dreams: moderate or severe vs. none or mild. (352)

Ey-32. Depression: moderate or severe vs. none or mild. (229)

Ey-33. Hypochondriacal symptoms: mild, moderate or severe vs. none. (244)

Ey-34. Hysterical conversion symptoms (motor, sensory, special senses, visceral or other): Any vs. none. (215)

Ey-35. Stress of bombardment or exposure among chief psychological causes of illness: Yes vs. no. (137)

Ey-36. Stress of wartime separation and regimentation among chief psychological causes of illness: Yes vs. no. (469)

Ey-37. Stress of domestic problems among chief psychological causes of illness: Yes vs. no. (202)

Ey-38. Intelligence: Below average vs. average or above. (183)

Ey-39. Boarded out of the army vs. returned fit for duty. (171)

Ey

LOADINGS ON UNROTATED ORTHOGONAL FACTORS

I. Neuroticism, instability, or lack of integration.

II. Introversion, desurgency, or inhibition: hysterical vs. affective.

III. Hypochondriasis or neurasthenia: Preoccupation with health of the body vs. more psychological type.

IV. Social misfit vs. psychological conflict.

	Identifications:	Pc[1]	?[2]	E	?	
No.	Variable	I	II	-III	IV	h^2
Ey- 1.	C:Age above 30	--	--	27	--	15
Ey- 2.	C:Unskilled	--	-45	--	-48	49
Ey- 3.	C:Unemployment	55	--	--	-36	49
Ey- 4.	C:Degraded work-history	--	-29	--	-29	22
Ey- 5.	C:Abnormality in parents	47	--	-35	31	48
Ey- 6.	C:Unsatisfactory home	43	--	-45	--	38
Ey- 7.	C:Married	--	39	--	--	24
Ey- 8.	C:No group membership	46	40	--	-32	50
Ey- 9.	C:Narrow interests	55	-57	--	--	63
Ey-10.	C:Alcohol	--	--	--	-36	16
Ey-11.	C:Abnormal before illness	61	--	--	33	56
Ey-12.	C:Badly organized personality	92	--	-35	--	100
Ey-13.	C:Dependent	65	--	--	--	53
Ey-14.	C:Little energy	53	-69	--	--	82
Ey-15.	C:Cyclothymic	46	31	--	37	45
Ey-16.	C:Schizoid	52	--	-26	29	42
Ey-17.	C:Hypochondriacal personality	31	--	41	--	32
Ey-18.	C:Obsessional	--	51	--	25	32
Ey-19.	C:Somatic anxiety	--	25	37	--	21
Ey-20.	C:Effort intolerance	--	--	63	26	54
Ey-21.	C:Dyspepsia, vomiting	54	--	36	--	45
Ey-22.	C:Fainting, fits	--	--	42	--	33
Ey-23.	C:Pain without cause	--	--	39	--	16
Ey-24.	C:Tremor	30	34	--	--	25
Ey-25.	C:Sex anomalies	--	-50	-54	--	56
Ey-26.	C:Irritability	--	41	--	--	23
Ey-27.	C:Apathy	--	48	--	-46	47
Ey-28.	C:Hysterical attitude	38	-41	--	--	32
Ey-29.	C:Poor muscular tone	47	--	--	45	46
Ey-30.	C:Headaches	--	36	--	--	21
Ey-31.	C:Anxiety, anxiety dreams	--	72	--	--	59
Ey-32.	C:Depression	--	61	--	--	42
Ey-33.	C:Hypochondriasis	36	--	79	--	82
Ey-34.	C:Hysterical conversion	--	-63	--	--	44
Ey-35.	C:Stress of bombardment	--	--	--	--	01
Ey-36.	C:Stress of army life	36	--	-39	--	38
Ey-37.	C:Stress of domestic problems	--	--	--	--	11
Ey-38.	C:Low intelligence	32	-25	--	--	19
Ey-39.	C:Boarded out of army	54	--	-25	--	35

[1] Probably contains some -G.

[2] Possibly a combination of Su and Hy; nearer Su than factor IV of Analysis CE.

ANALYSIS Fe

Ferguson, L. W. Primary Social Attitudes. J. Psychol., 1939, 8, 217-223.

The subjects were 185 Stanford University students. They were given two forms of the Thurstone attitude scales (see Analysis Ch) on attitudes toward censorship, law, patriotism, and communism in addition to the six scales named in the table. The correlation coefficients used in a preliminary analysis were the averages of the tetrads relating the two forms of the scales to one another. Since simple structure could not be obtained in the rotation of factors, the four scales mentioned above were dropped, the 2 forms were used as separate variables, and orthogonal rotation then produced the tight structure as indicated.

LOADINGS ON ORTHOGONAL FACTORS

I. Radicalism-conservatism

II. Treatment of criminals, capital punishment, and war.

No.	Identifications: Variable	Re -I	Se -II	h^2
Fe- 1.	J:War A	--	-59	35
Fe- 2.	J:War B	--	-59	35
Fe- 3.	J:God A	69	--	47
Fe- 4.	J:God B	70	--	50
Fe- 5.	J:Treatment of criminals A	--	-70	50
Fe- 6.	J:Treatment of criminals B	--	-71	51
Fe- 7.	J:Capital punishment A	--	-75	57
Fe- 8.	J:Capital punishment B	--	-75	56
Fe- 9.	J:Evolution A	-72	--	55
Fe-10.	J:Evolution B	-77	--	59
Fe-11.	J:Birth Control A	-49	--	25
Fe-12.	J:Birth Control B	-49	--	26

ANALYSIS FH

Ferguson, L. W., Humphreys, L. G. and Strong, F. W. A factorial analysis of interests and values. *J. educ. Psychol.*, 1941, *32*, 197-204.

The subjects were 93 male Stanford University students. Centroid analysis was used with orthogonal rotation. The variables were the six scales of the Allport-Vernon Study of Values (*see Analysis Du*) and "Representative" scales from the Strong Vocational Interest Blank for men (*see Analysis Sg*).

LOADINGS ON ORTHOGONAL FACTORS

I. Thurstone's "interest in language"
II. Thurstone's "interest in people"
III. Thurstone's "science" factor
IV. Similar to V. Largely religious
V. Similar to IV. Political and economic

	Identifications:	Il	Iw[1]	Is	Ir?	?	
No.	Variable	I	II	III	IV	V	h^2
ALLPORT-VERNON							
FH- 1.	J:Theoretic	35	--	59	--	--	50
FH- 2.	J:Economic	-67	--	--	--	-60	92
FH- 3.	J:Aesthetic	38	--	--	-47	--	37
FH- 4.	J:Social	--	--	--	47	--	24
FH- 5.	J:Political	-26	--	-58	--	72	100
FH- 6.	J:Religious	--	--	--	89	--	87
STRONG							
FH- 7.	I:Teacher	--	76	38	--	--	79
FH- 8.	I:L.I. Salesman	--	--	-93	28	--	96
FH- 9.	I:C.P.A.	--	53	--	--	--	36
FH-10.	I:Office Worker	-78	56	--	--	--	95
FH-11.	I:Physician	51	-40	65	--	--	86
FH-12.	I:Lawyer	77	--	-40	--	--	78
FH-13.	I:YMCA Secretary	--	79	--	--	--	76
FH-14.	I:Chemist	--	--	95	--	--	98

---

[1] Probably some Gs in this factor.

ANALYSIS FK

Freeman, G. L., and Katzoff, E. T. Individual differences in physiological reactions to stimulation and their relation to other measures of emotionality. J. exp. Psychol., 1942, 31, 527-537.

The subjects were 24 college men. For each variable the subjects were ranked, and intercorrelations were computed by the rank-difference method.

FK- 1. Basal conductance variability. This was the range of skin conductance at rest for the several experimental sessions.

FK- 2. Average conductance recovery quotient - startle. Where A is basal conductance level, B is the level near the high point one minute after stimulation, and C is the recovery level 5 minutes after stimulation, the formula for this variable is $(B - C)/(B - A)$. Stimulation was a .22 blank fired outside line of vision and without warning. The situation was repeated for each subject after 1 to 30 days.

FK- 3. Average conductance recovery quotient - motor. Same formula as above. The subject was instructed to push "right" or "left" keys with the index finger as signaled by a "right" or "left" stimulus light. Wrong or delayed responses were punished by electric shock delivered through the reaction key. The series began with five trials in which either the right or left light was flashed; then followed 20 trials of which 10 (in random order) were conflict situations, i.e., both lights flashed simultaneously with shock punishment for all possible reactions. Finally, 5 more trials were given in which no double (conflict) stimulation was given. The entire test took 7 minutes. Reaction time was recorded throughout. The situation was repeated for each subject after 1 to 30 days.

FK- 4. Average conductance recovery quotient - verbal. Same formula as above. After the subject was relaxed to the "basal" state, instructions calculated to reinforce existing personal conflicts were read. The subject then responded to a series of stimulus words, some of which were non-critical (such as "chair"), and some of which were critical (such as "masturbation"). The critical words were those on which blocking by an acquired inhibition or restraint might reasonably be expected. The entire test, including the reading of instructions, took 18 minutes. The situation was repeated for each subject after 1 to 30 days.

FK- 5. Average conductance recovery quotient - distraction. Same formula as above. The subject was instructed to make a series of pitch discriminations. The test began with 10 easily discriminable pairs of tones, passed to discriminations of increasing difficulty, and then returned to the first 10 "easy" discrimination pairs for a recheck. During the 40 interpolated pairs of stimuli, discriminations were made more difficult by introducing a distraction (intermittent ringing of telephone bell). The test took 7 minutes. The situation was repeated for each subject after 1 to 30 days.

FK- 6. Per cent conductance increment - startle. The formula was (B - A)/A. (See No. 2.) Stimulus as in No. 2. Stimulus repeated after 1-30 days.

FK- 7. Per cent conductance increment - motor. As above for "motor."

FK- 8. Per cent conductance increment - verbal. As above for "verbal."

FK- 9. Per cent conductance increment - distraction. As above for "distraction."

FK-10. Mean basal conductance. Since each subject rested until his palmar conductance became stable, it was possible to compute a mean level at which the stabilization occurred in each subject. This measure was taken as an index of the general level of physiological activity.

FK-11. Basal movement variability. The subjects lay on a pneumatic mattress, by means of which gross (restless) movements were recorded mechanically. This variable was derived by taking the range for the several experimental sessions of the subjects' mean basal (resting) movement scores (No.16).

FK-12. Movement increment - startle. This was the amount of movement which followed the stimulus expressed as a percentage increment over the basal or resting amount of movement. Stimulus as in No. 2, repeated after 1-30 days.

FK-13. Movement increment - motor. As above for "motor."

FK-14. Movement increment - verbal. As above for "verbal."

FK-15. Movement increment - distraction. As above for "distraction."

FK-16. Mean basal movement. Mean amount of movement during resting periods in the various experimental sessions.

FK-17. Psychiatric rating. This was the average ranking for emotional stability by Dr. Leon Saul of the Institute of Psychoanalysis and the senior author.

FK-18. Reaction time - verbal. Average reaction time in the "verbal" situation in No. 4.

FK-19. Voice level recovery quotient - verbal. In the "verbal" situation, let the level of volume of voice while responding to the first non-critical words be A, let the level for the critical words be B, and for the final non-critical words be C. The formula for this variable was (B - C)/(B - A).

FK-20. Voice level change - verbal. Due to the fact that the voice level was frequently lowered to the point of a whisper in the case of critical words, there was no reason to compute voice level increment. Consequently, voice level change in either direction from a pre-test "basal" was the measure employed.

FK-21. Reaction time recovery quotient - verbal. Reaction times for pre-critical, critical, and post-critical associations were recorded in the verbal test. The average of pre-critical reaction times supplied a "basal" analogous to point A in the galvanic response curve. Similarly, critical reaction time averages yielded a B point, and post-critical reaction time averages a C point. The formula, then, was $(B - C)/(B - A)$.

FK-22. Behavior rating. The subjects rated themselves on a 5-point continuum on each of 18 behavioral aspects of "emotionality," such as: "Are you emotionally calm or excitable?"

FK-23. Reaction time recovery quotient - motor. Same as No. 21 for "motor."

FK-24. Time sample of nervous movements.

FK-25. General neuroticism questions. Questions were selected from Guilford's and Thurstone's Personality schedules and the Northwestern E-I test.

FK-26. Anxiety questions. Selected as in No. 25.

FK-27. General drive questions. Selected as in No. 25.

FK-28. Inhibitory control questions. Selected as in No. 25.

FK-29. Visceral disturbance questions. Selected as in No. 25.

FK-30. Variability questions. Selected as in No. 25.

FK

LOADINGS ON ORTHOGONAL FACTORS

I.	Emotional Control	III.	Self-rated Emotionality
II.	Physiological Arousal	IV.	Doublet

	Identifications:	?	Ne?	E?	?	
No.	Variable	I	II	III	IV	h^2
FK- 1.	C:Basal Conductance Variability	--	38	-31	--	25
FK- 2.	T:Avg. Cond. Recovery Quotient - Startle	89	--	--	35	93
FK- 3.	T:Avg. Cond. Recovery Quotient - Motor	55	--	--	--	35
FK- 4.	T:Avg. Cond. Recovery Quotient - Verbal	75	--	--	--	58
FK- 5.	T:Avg. Cond. Recovery Quotient - Distraction	--	73	--	--	59
FK- 6.	T:Per Cent Conductance Increment - Startle	--	86	--	--	79
FK- 7.	T:Per Cent Conductance Increment - Motor	--	86	--	--	83
FK- 8.	T:Per Cent Conductance Increment - Verbal	35	58	--	--	47
FK- 9.	T:Per Cent Conductance Increment - Distraction	--	90	--	--	86
FK-10.	C:Mean Basal Conductance	--	43	--	-25	28
FK-11.	C:Basal Movement Variability	62	--	50	--	73
FK-12.	T:Movement Increment - Startle	48	--	06	--	28
FK-13.	T:Movement Increment - Motor	65	--	--	--	43
FK-14.	T:Movement Increment - Verbal	34	25	--	--	23
FK-15.	T:Movement Increment - Distraction	49	34	-33	--	52
FK-16.	C:Mean Basal Movement	73	--	25	--	63
FK-17.	R:Psychiatric Rating	57	--	30	--	49
FK-18.	C:Reaction Time - Verbal	--	--	--	72	56
FK-19.	T:Voice Level Recovery Quotient - Verbal	61	--	--	41	56
FK-20.	T:Voice Level Change - Verbal	38	32	--	32	35
FK-21.	T:Reaction Time Recovery Quotient - Verbal	--	--	03	72	52
FK-22.	Q:Behavior Rating	--	--	45	--	21
FK-23.	T:Reaction Time Recovery Quotient - Motor	31	--	--	--	12
FK-24.	T:Time Sample of Nervous Movements	--	--	60	--	39
FK-25.	Q:General Neuroticism Questions	--	--	92	--	89
FK-26.	Q:Anxiety Questions	34	--	68	--	60
FK-27.	Q:General Drive Questions	--	--	33	26	23
FK-28.	Q:Inhibitory Control Questions	31	--	58	--	44
FK-29.	Q:Visceral Disturbance Questions	--	--	53	--	30
FK-30.	Q:Variability Questions	--	--	58	-39	55

ANALYSIS Fn

Flanagan, J. C. Factor analysis in the study of personality. Stanford University: Stanford University Press, 1935, pp. 103.

The subjects were 305 eleventh-grade boys. Analysis was done by the Method of Principal Components yielding 2 orthogonal factors from the 4 variables. No rotation was made, but rotation was not called for.

The variables were the 4 scales of the Bernreuter Personality Inventory, a 125-item, Yes-?-No questionnaire. The scores were obtained by summing the weights assigned to the responses selected by the subject. Weights are assigned to each of the 3 alternative responses for each item. Sample items given below are those with the largest weight differentials between "Yes" and "No." The weights for "Yes" and "No", respectively, are given in parentheses.

Fn-1. B1 - Neurotic Tendency

(7, -7) Do you often feel just miserable?
(7, -7) Are your feelings easily hurt?
(7, -7) Does some particularly useless thought keep coming into your mind to bother you?
(7, -7) Do your feelings alternate between happiness and sadness without apparent reason?

Fn-2. B2 - Self Sufficiency

(7, -7) Do you usually enjoy spending an evening alone?
(6, -6) Do you prefer making hurried decisions alone?
(6, -5) Do you think you could become so absorbed in creative work that you would not notice a lack of intimate friends?

Fn-3. B3 - Introversion-Extroversion

(6, -7) Are your feelings easily hurt?
(5, -4) Do you experience many pleasant or unpleasant moods?

Fn-4. B4 - Dominance

(-4, 6) Are you troubled with shyness?
(-5, 5) Do you have difficulty in starting a conversation with a stranger?

Fn

LOADINGS ON ORTHOGONAL FACTORS

I. Neurotic Tendency, Introversion, Submission
II. Self Sufficiency
III. Dominance?

	Identifications:	?[1]	Ss	So?	
No.	Variable	I	II	III	h^2
Fn-1.	Q:Neurotic tendency	-89	--	--	84
Fn-2.	Q:Self sufficiency	59	65	--	80
Fn-3.	Q:Introversion-extroversion	-86	32	--	85
Fn-4.	Q:Dominance	83	--	36	83

[1] Possibly a combination of Cd and So.

ANALYSIS FT

Ford, C. F., and Tyler, L. E. A factor analysis of Terman and Miles' M-F test. J. app. Psychol., 1952, 36, 251-253.

The subjects were ninth grade students attending junior high schools in Eugene, Oregon. A separate analysis was made for 157 boys and 153 girls. The variables are derived from the Terman and Miles Attitude-Interest Analysis Blank. Scores were grouped into 14 subscores rather than the 7 indicated on the blank. Reliabilities were computed but not reported in the article. The subscores called Ink Blot Identification and Opinions were omitted because of low reliability and poor power to discriminate between boys and girls. All 14 are described below for completeness. Items are keyed + for masculine, - for feminine. The rotated loadings are reported only to one decimal place.

1. Word Association. Check word that goes best or naturally with given word.
   Ex: Pole   barber (0)   cat (+)   north (-)   telephone (+) 60 items.

(Not used). Ink Blots. Check one of four names for a given ink blot. 18 items.

2. Information. Sentence completion covering a variety of fields, 3 or 4 choices. 70 items.

3. Anger. Check whether 17 items for you cause very much, much, little, or no anger.
   Ex: Being blamed for something you have not done. -VM, OM, +L, ON.

4. Fear. Check whether 20 items for you cause very much, much, little, or no fear.
   Ex: Being lost. -VM, -M, +L, +N.

5. Disgust. Check whether 18 items for you cause very much, much, little, or no disgust.
   Ex: An unshaven man. -VM, -M, +L, +N.

6. Pity. Check whether 15 items for you arouse very much, much, little, or no pity.
   Ex: A dog that must be killed for biting people. -VM, OM, +L, +N.

7. Ethical Attitudes. Check whether you feel 28 items are 3. extremely wicked, 2. decidedly bad, 1. somewhat bad, or 0. not really bad.
   Ex: Picking flowers in a public park. 03, -2, +1, +0.

8. Interests. Check 71 occupations, people, and activities as to like, dislike, or neither.

9. Books. Check 23 books as to like, dislike, or neither.

10. Activity Preference. Check 8 subjects for art, 6 news events, 11 trips as to like, dislike, or neither.

11. Famous People. Check 28 names as to like, dislike, or neither.

(Not used) Opinions. Check 14 opinions or variety of subjects true or false.
Ex: The face shows how intelligent a person is. -T, +F.

12. Introvertive Response. Answer 42 personality questions yes or no.
Ex: Do you like most people you know? +Yes, 0 No.

LOADINGS ON ORTHOGONAL FACTORS FOR BOYS

I. An emotional characteristic: toughness or insensitivity

II. An interest factor

No.	Identifications: Variable	Se I	M_f II	h^2
FT1- 1.	I:Word Association	--	--	07
FT1- 2.	I:Information	--	--	00
FT1- 3.	J:Anger	60	--	38
FT1- 4.	J:Fear	30	--	12
FT1- 5.	J:Disgust	80	--	68
FT1- 6.	J:Pity	60	--	43
FT1- 7.	J:Ethical Attitudes	70	--	54
FT1- 8.	I:Interests	--	60	39
FT1- 9.	I:Books	--	60	39
FT1-10.	I:Activity Preference	--	70	45
FT1-11.	I:Famous People	--	--	00
FT1-12.	Q:Introvertive Response	30	--	14

FT

LOADINGS ON ORTHOGONAL FACTORS FOR GIRLS

I. An emotional factor: sensitivity

II. An interest factor

III. A social role factor reflecting a girl's awareness of her part in our culture

	Identifications:	Se	M_f	?[1]	
No.	Variable	I	II	III	h^2
FT2- 1.	I:Word Association	--	--	80	56
FT2- 2.	I:Information	--	--	--	06
FT2- 3.	J:Anger	60	--	60	69
FT2- 4.	J:Fear	50	30	-40	48
FT2- 5.	J:Disgust	60	--	--	40
FT2- 6.	J:Pity	60	--	--	32
FT2- 7.	J:Ethical Attitudes	50	--	--	30
FT2- 8.	I:Interests	--	40	40	35
FT2- 9.	I:Books	--	50	--	26
FT2-10.	I:Activity Preference	--	60	30	49
FT2-11.	I:Famous People	--	--	--	08
FT2-12.	Q:Introvertive Response	--	--	--	08

[1] Awareness of or background resulting from social role.

ANALYSIS Gi

Gibb, C. A. Personality traits by factorial analysis (II). Aust. J. Psychol. Phil., 1942, 20, 86-110.

The subjects were a total of 117 men and 83 women in their first two years in Psychology and Social Science classes at the University of Sidney. The analysis used partial tetrachoric correlations which held constant the influence of age. A first analysis used the 4 Bernreuter scales in addition to the variables listed below, but the results were considered to suffer from very high correlations between overlapping variables and were not fully reported.

Gi- 1. Allport A-S Reaction Study. This is a questionnaire presenting 41 items, social or everyday situations. The subject is given 2 to 4 alternative responses to indicate his "usual reaction." A high score represents ascendance, a low score submissiveness.

Sample item: Do you feel self-conscious in the presence of superiors in the academic or business world?

Markedly ________
Somewhat ________
Not at all ______

Gi- 2. Personal Inventory. This was 42 items selected from Thurstone's Personality Schedule, a questionnaire inventory of 223 Yes-No items. The 42 items, covering sociability, self-consciousness and emotionality, constitute the variables of a factor analysis by Gibb not reported here. See Supplementary Analysis List.

Variables 3 and 4 are scales for the Bernreuter Personality Inventory (see Analysis Fl). Sample items given below are those with the largest weight differentials between "Yes" and "No". The weights for "Yes" and "No", respectively, are given in parentheses.

Gi- 3. Flanagan Fl-C Scale: Self-Consciousness.

(8, -5) Are you troubled with shyness?
(6, -6) Do you often find that you cannot make up your mind until the time for action has passed?
(8, -4) Do you have difficulty in starting a conversation with a stranger?

Gi- 4. Flanagan F2-S Scale: Solitariness.

(6, -7) Have books been more entertaining to you than companions?
(8, -4) Do you think you could become so absorbed in creative work that you would not notice a lack of intimate friends?

Gi- 5. Otis Self Administering Test of General Ability. Mainly a test of verbal ability.

Variables 6 through 9 were selected subtests of the Australian Institute of Industrial Psychology Clerical Test.

Gi- 6. Digit Symbol Substitution.

Gi- 7. Spelling Correction.

Gi- 8-17. See table of loadings below.

LOADINGS ON ORTHOGONAL FACTORS

E. Emotional Instability
A. Concentration or Attention
V.F. Verbal Fluency
P.F. Pictorial Fluency
C. Self-Consciousness
S. Solitariness

	Identifications:	?[1]	P[2]	?[3]	?	?[4]	Ss	
No.	Variable	-E	A	VF	PF	-C	-S	h^2
Gi- 1.	Q:A-S Reaction Study	--	--	--	--	69	--	51
Gi- 2.	Q:Personal Inventory	-65	--	--	--	-61	--	91
Gi- 3.	Q:Flanagan F1-C	-78	--	--	--	-54	--	90
Gi- 4.	Q:Flanagan F2-S	--	--	--	--	--	61	39
Gi- 5.	T:Otis	52	--	33	--	--	35	52
Gi- 6.	T:Digit-Symbol	--	69	--	--	--	--	52
Gi- 7.	T:Spelling	30	46	--	--	--	33	46
Gi- 8.	T:Free-chain Assoc.	--	61	--	--	--	--	37
Gi- 9.	T:Concentration	--	57	--	--	--	--	46
Gi-10.	T:Fluency-Pictures	--	--	65	--	--	-25	50
Gi-11.	T:Fluency-Word Series	--	35	77	--	--	--	74
Gi-12.	T:Fluency-Forms	--	--	--	85	--	--	75
Gi-13.	T:Fluency-Topics	-35	--	--	--	--	27	35
Gi-14.	T:Fluency-Ink Blots	--	--	37	51	--	--	44
Gi-15.	T:Perseveration- ±00	--	--	--	47	--	--	33
Gi-16.	T:Perseveration- Z	--	--	--	--	--	-42	25
Gi-17.	C:Sex (M)	62	--	--	--	--	--	45

[1] Possibly a combination of -E, Mf and So.

[2] Perceptual Speed, see Psychometric Monograph, No. 5.

[3] Possibly a combination of Word Fluency and Ideational Fluency, see Psychometric Monograph, No. 5.

[4] Possibly a combination of So, Do and Sn.

ANALYSIS GuA

Guilford, J. P., and Guilford, R. B. Personality factors S, E, M, and their measurement. J. Psychol., 1936, 2, 109-127.

The subjects were 930 students. Tetrachoric correlations were used. The factors seemed to be best described as orthogonal, and so orthogonal rotation was used.

GuA- 1. Do you express yourself better in speech than in writing?

GuA- 2. Are you inclined to limit your acquaintances to a select few?

GuA- 3. Do you generally prefer to take the lead in group activities?

GuA- 4. Do you prefer to read about a thing rather than experience it?

GuA- 5. Do you like work which requires considerable attention to details?

GuA- 6. Are you generally very particular about your dress and personal property?

GuA- 7. Are you inclined to be considerate of other people's feelings?

GuA- 8. Are you inclined to act on the spur of the moment without thinking things over?

GuA- 9. Have you ever kept a personal diary of your own accord?

GuA-10. Do you work much better when you are praised?

GuA-11. Do you like to change from one type of work to another frequently?

GuA-12. Are you inclined to study the motives of others?

GuA-13. Do you daydream frequently?

GuA-14. Do you prefer to work with others rather than alone?

GuA-15. Are you inclined to worry over possible misfortunes?

GuA-16. Are you frequently somewhat absent minded?

GuA-17. Do you like to persuade others to your point of view?

GuA-18. Are you inclined to keep in the background on social occasions?

GuA-19. Are you more interested in athletics than in intellectual things?

GuA-20. Do you usually dislike to change opinions you have already formed?

GuA-21. Do you like to speak in public?

GuA

GuA-22. Do you prefer to work things out on your own hook rather than accept suggestions from others?

GuA-23. Do you have frequent ups and downs in mood, either with or without apparent cause?

GuA-24. Are you inclined to be slow and deliberate in movement?

GuA-25. Are your feelings rather easily hurt?

GuA-26. Do you enjoy getting acquainted with most people?

GuA-27. Are you inclined to keep quiet when out in company?

GuA-28. Do you adapt yourself easily to new conditions?

GuA-29. Do you like to confide in others?

GuA-30. Do you express such emotions as delight, sorrow, anger, etc., readily?

GuA-31. Are you inclined to think about yourself much of the time?

GuA-32. Do you like to have people watch you when you are working?

GuA-33. Do you frequently rewrite social letters before mailing them?

GuA-34. Do you like to sell things?

GuA-35. Do you get rattled easily in exciting situations?

GuA-36. Are you a male?

GuA

LOADINGS ON ORTHOGONAL FACTORS

I. S (social introversion-extroversion, sociability, or shyness)
II. E (emotional immaturity, lack of self-sufficiency or of cortical control over the emotional centers)
III. M (masculinity-femininity, aggressiveness, ascendance, submission)
IV. R (carefree, careless, impulsive)?
V. T (thinking introversion, intellectual leadership, liking thinking)?

	Identifications:	So	Cd	Mf	Sf	Ip		
No.	Variable	-I	II	III	IV	V	h^2	R*
GuA- 1.	Q:Speech better than writing	35	--	--	--	--	17	82
GuA- 2.	Q:Limits acquaintances	-49	28	--	--	--	33	73
GuA- 3.	Q:Leads group activities	50	--	29	--	50	59	92
GuA- 4.	Q:Read rather than experience	-43	--	--	--	--	23	72
GuA- 5.	Q:Likes detailed work	--	--	--	--	--	07	84
GuA- 6.	Q:Particular about dress	--	--	--	64	-33	55	85
GuA- 7.	Q:Considerate of feelings	--	--	--	77	--	60	87
GuA- 8.	Q:Acts on spur of moment	--	33	-25	--	--	29	80
GuA- 9.	Q:Has kept a diary	--	--	-42	--	--	24	100
GuA-10.	Q:Works better when praised	--	28	-25	--	--	15	80
GuA-11.	Q:Likes changes in work	--	--	--	--	--	09	77
GuA-12.	Q:Studies motives of others	--	--	--	--	42	21	81
GuA-13.	Q:Daydreams frequently	--	42	--	-31	--	29	76
GuA-14.	Q:Likes work with others	--	--	--	--	-44	29	88
GuA-15.	Q:Worries over misfortunes	--	54	--	--	--	37	76
GuA-16.	Q:Frequently absent minded	--	--	-47	--	--	27	78
GuA-17.	Q:Likes persuading others	33	--	--	--	--	21	90
GuA-18.	Q:Keeps in background	-66	--	--	--	--	44	75
GuA-19.	Q:Athletics over intellectual	--	--	41	--	-69	65	80
GuA-20.	Q:Dislikes changing opinions	--	--	--	--	--	08	51
GuA-21.	Q:Likes speaking in public	39	--	28	--	33	36	93
GuA-22.	Q:Likes working on own hook	--	--	--	--	34	21	65
GuA-23.	Q:Ups and downs in mood	--	57	--	--	--	37	80
GuA-24.	Q:Slow and deliberate	-41	--	--	25	--	26	94
GuA-25.	Q:Feelings easily hurt	--	56	--	--	--	34	84
GuA-26.	Q:Enjoys getting acquainted	65	--	--	--	--	53	89
GuA-27.	Q:Keeps quiet in company	-72	--	--	--	--	53	87
GuA-28.	Q:Adapts to new conditions	41	-25	--	--	-25	32	81
GuA-29.	Q:Likes to confide in others	30	--	--	--	--	19	74
GuA-30.	Q:Expresses emotions readily	37	42	--	--	--	35	71
GuA-31.	Q:Thinks about self	--	35	--	-27	--	26	61
GuA-32.	Q:Likes to be watched	25	--	34	--	--	21	71
GuA-33.	Q:Rewrites social letters	--	27	--	--	--	11	90
GuA-34.	Q:Likes to sell things	29	--	44	--	--	29	91
GuA-35.	Q:Gets rattled easily	--	39	-38	--	--	35	80
GuA-36.	Q:Male sex	--	--	83	--	--	69	100

*Reliability is based on only 277 subjects retested after one month.

ANALYSIS GuB

Guilford, J. P. and Guilford, R. B. Personality factors, D, R, T, and A. J. abn. and soc. Psychol., 1939, 34, 21-36.

The subjects were 610 men and 390 women from classes in elementary psychology where the questionnaire was introduced as a class demonstration. "As an extra inducement, they were told that they might know their scores on two traits, 'rhathymia' and 'thinking introversion'."

The battery of questions was set up to test the previously obtained factors of rhathymia and thinking introversion. The questionnaire, therefore, emphasized the happy-go-lucky (rhathymic) characteristics of people, the hypothetical thinking dimensions, and their opposites. Some seclusiveness items were also included. Altogether 89 items were prepared; 30 of these were used in the analysis. Two other items had been correlated with the 30, but were eliminated because of their very low correlations.

Three possible responses were permitted for each item: "Yes," "?," or "No." In every case the responses were reduced to 2 categories by combining the "?" with "Yes" or "No," whichever made the more even two-fold division. Tetrachoric correlations were used. The table of loadings given in the article is based on orthogonal rotation, although the authors explain that there would be some advantages in a rotation such that Factor I correlated .67 with Factor VI and .48 with Factor IV, which Factor VI also correlated .53 with Factor IV. Another rotational solution for these same data is given in Analysis RTC.

GuB- 1. Are you ordinarily a carefree individual?

GuB- 2. Do you usually have difficulty in starting a conversation with strangers?

GuB- 3. Do you prefer to read about a thing rather than to experience it?

GuB- 4. Do you hesitate to lend your personal property even to close friends?

GuB- 5. Are you inclined to be considerate of other people's feelings?

GuB- 6. Are you relatively unconcerned about what others think of your actions?

GuB- 7. Are you inclined to analyze the motives of others?

GuB- 8. Do you consider yourself a practical individual rather than one who theorizes?

GuB- 9. Do you usually keep in close touch with things going on around you?

GuB-10. Are you inclined to worry over possible misfortunes?

GuB-11. Do you often have the "blues"?

GuB-12. Are you inclined to keep in the background on social occasions?

GuB

GuB-13. Are you more interested in athletics than in intellectual things?

GuB-14. Would you rate yourself as an impulsive individual?

GuB-15. Do you enjoy getting acquainted with most people?

GuB-16. Do you frequently find yourself in a meditative state?

GuB-17. Are you inclined to be over-conscientious?

GuB-18. Do you often crave excitement?

GuB-19. Are you inclined to ponder over your past?

GuB-20. Are you inclined to stop and think things over before acting?

GuB-21. Are you less attentive than most individuals to things going on around you?

GuB-22. Do you like to discuss the more serious questions of life with your friends?

GuB-23. Do you like to try your wits in solving puzzles?

GuB-24. Would you rate yourself as a happy-go-lucky individual?

GuB-25. Do you enjoy thinking out complicated problems?

GuB-26. Are you inclined to be introspective, that is, to analyze yourself?

GuB-27. Are you usually unconcerned about the future?

GuB-28. Do you usually become so absorbed in watching an athletic contest that you completely forget yourself?

GuB-29. Can you relax yourself easily when sitting or lying down?

GuB-30. Are you more alert to your immediate surroundings than the average person?

GuB

LOADINGS ON ORTHOGONAL FACTORS

I. Depression, D. Depression with a strong aspect of thinking of a meditative sort.

II. Rhathymia, R. Freedom from care, lack of serious-mindedness, impulsiveness. Not the opposite of Depression.

III. Liking for Thinking, LT. A liking for rather than indulgence in thinking.

IV. Shyness or Seclusiveness, S.

V. Not named. Perhaps concerns a cool, positive, person who lives in the present.

VI. Thinking, T. This may be "Thinking Introversion" but is not clear.

VII. Alertness, A.

VIII and IX. No interpretation.

	Identifications:	Cd?	Rh	Iz	So	Mp	Ip	Al	Ia	?	
No.	Variable	I	II	III	IV	-V	-VI	VII	VIII	IX	h^2
GuB- 1.	Q:Ordinarily carefree	-55	64	--	--	--	--	--	--	--	81
GuB- 2.	Q:Hard to start talking	--	--	--	-65	--	--	--	--	--	52
GuB- 3.	Q:Prefers to read	--	--	--	-31	--	--	--	--	--	27
GuB- 4.	Q:Hesitates to lend	--	--	--	--	--	--	--	--	--	13
GuB- 5.	Q:Considerate	--	--	28	--	--	--	--	--	--	25
GuB- 6.	Q:Unconcerned about thoughts	-29	26	--	--	--	--	--	--	34	35
GuB- 7.	Q:Analyzes motives	33	--	--	--	--	48	--	--	--	42
GuB- 8.	Q:Practical	--	--	--	--	-25	--	--	--	--	27
GuB- 9.	Q:Keeps in touch	--	--	--	--	--	--	78	--	--	70
GuB-10.	Q:Worries	63	--	--	--	--	--	--	--	--	47
GuB-11.	Q:Has blues	66	--	--	--	--	--	--	--	--	55
GuB-12.	Q:Keeps in background	--	--	--	-69	--	--	--	--	--	56
GuB-13.	Q:Athletics over intellectual	--	40	--	--	--	-25	--	35	--	36
GuB-14.	Q:Impulsive	--	47	--	28	38	--	--	--	--	46
GuB-15.	Q:Enjoys meeting	-26	--	--	55	--	--	--	--	--	50
GuB-16.	Q:Often meditative	57	--	--	--	--	47	--	--	--	61
GuB-17.	Q:Over-conscientious	29	--	--	--	--	--	--	--	27	34
GuB-18.	Q:Craves excitement	--	40	--	--	-32	--	--	--	--	34
GuB-19.	Q:Ponders past	53	--	--	--	26	--	--	--	--	45
GuB-20.	Q:Stops and thinks	--	-55	--	--	-35	--	--	--	--	66
GuB-21.	Q:Less attentive	--	--	--	--	--	--	-75	--	--	69
GuB-22.	Q:Serious discussions	--	--	--	--	--	39	--	--	--	28

GuB

No.	Identifications: Variable	Cd? I	Rh II	Iz III	So IV	Mp -V	Ip -VI	Al VII	Ia VIII	? IX	h^2
GuB-23.	Q:Solves puzzles	--	--	61	--	--	--	--	--	--	44
GuB-24.	Q:Happy-go-lucky	-30	76	--	--	--	--	--	--	--	77
GuB-25.	Q:Likes problems	--	--	64	--	--	29	--	--	--	60
GuB-26.	Q:Introspective	41	--	--	--	--	57	--	--	--	57
GuB-27.	Q:Unconcerned about future	-34	27	--	--	--	--	--	--	--	23
GuB-28.	Q:Absorbed in athletics	--	27	--	--	--	--	--	25	--	32
GuB-29.	Q:Relaxes easily	-36	--	28	--	--	--	--	25	-32	42
GuB-30.	Q:Alert	--	--	--	--	--	--	54	--	--	37

ANALYSIS GuC

Guilford, J. P. and Guilford, R. B. Personality factors N and GD. J. abn. & soc. Psychol., 1939, 34, 239-248.

The subjects were 600 students in elementary psychology at Northwestern University and the University of Nebraska. This was introduced as a class demonstration of personality questionnaires. As an added inducement for a truthful expression of their own characteristics as they knew them, the students were told that they might be given later a score for hyperactivity.

A battery of 100 questionnaire items was collected consisting of questions about an individual's characteristic manner of reacting on a hyperactivity-hypoactivity continuum, but also including other items known to contain loadings with already discovered factors. The purpose of the additional kinds of items was partly to help disguise the real nature of the inventory and partly to check previous factor analyses and perhaps to find new items loaded with old factors. This analysis deals with 24 "of the most representative of these items." One item was omitted from the analysis because its maximum coefficient of correlation was only .14.

Three possible responses were permitted for each item: "Yes," "?," or "No." In every case the responses were reduced to 2 categories by combining the "?" with "Yes" or "No," whichever made the more even two-fold division. Tetrachoric correlations were used. Another factorial solution for these same data is given in Analysis RTD.

GuC- 1. In a difficult or exacting situation have you often found yourself perspiring?

GuC- 2. Do you feel compelled to change your bodily position or posture frequently while sitting?

GuC- 3. Do you like to change from one type of work to another frequently?

GuC- 4. Are you easily disturbed by distracting stimuli while doing mental work?

GuC- 5. Are you inclined to be slow and deliberate in movement?

GuC- 6. Do you express such emotions as delight, sorrow, anger, and the like readily?

GuC- 7. Are you easily startled by unexpected stimuli?

GuC- 8. Are you inclined to stop and think things over first before acting?

GuC- 9. Do you have any "nervous habits" like chewing your pencil or biting your finger nails?

GuC-10. Does it annoy you to see a person clean his finger nails in public?

GuC-11. Do you usually eat more rapidly than the average person even though you have plenty of time?

GuC-12. Are you inclined to rush from one activity to another without pausing for rest?

GuC-13. Would you like a position in which you changed from one kind of task to another frequently during the day?

GuC-14. While listening to a lecture, does your hand keep active in writing or drawing when not taking notes?

GuC-15. Would you rate yourself as a happy-go-lucky individual?

GuC-16. Do you frequently suffer from insomnia?

GuC-17. Do you often find yourself hurrying to get places even when there is time?

GuC-18. Are you inclined to be quick in your actions?

GuC-19. Do you think you use up more energy than most individuals in getting things done?

GuC-20. Can you turn out a large amount of work in a short time?

GuC-21. Can you relax yourself easily when sitting or lying down?

GuC-22. Would you rate yourself as a talkative individual?

GuC-23. Do you dislike very much to be interrupted in a task that you want to finish?

LOADINGS ON ORTHOGONAL FACTORS

I. Nervousness, N. Jumpy, nervous, hypertense, over-reaction to trifling stimuli. Possibly a hypoparathyroid syndrome.

II. General Drive, GD. Fast-moving, dynamic, hurried.

IV. Variety-loving trait?

III, V, VI, and VII. No interpretation.

No.	Identifications: Variable	Ne I	Su[1] II	? III	Pe -IV	? V	? VI	? VII	h^2
GuC- 1.	Q:Perspires	34	--	--	--	39	--	--	27
GuC- 2.	Q:Changes posture	43	--	--	--	41	--	--	39
GuC- 3.	Q!Likes changing work	--	--	--	-80	--	--	--	66
GuC- 4.	Q:Easily distracted	57	--	--	-25	--	--	--	45
GuC- 5.	Q:Slow movement	--	-28	--	57	--	-35	--	62
GuC- 6.	Q:Expresses emotions	33	--	--	--	--	--	--	20
GuC- 7.	Q:Easily startled	51	--	--	--	--	--	--	31
GuC- 8.	Q:Stops and thinks	--	-36	--	34	--	--	--	31
GuC- 9.	Q:Nervous habits	42	--	--	--	--	28	--	29
GuC-10.	J:Annoyed by nails	--	--	--	--	--	-28	--	23
GuC-11.	Q:Eats rapidly	--	38	--	--	--	38	--	32
GuC-12.	Q:Rushes	--	53	--	--	37	--	--	43
GuC-13.	Q:Likes changing tasks	--	--	--	-81	--	--	--	66
GuC-14.	Q:Doodles	42	--	--	--	--	--	--	29
GuC-15.	Q:Happy-go-lucky	-33	40	35	--	--	--	--	43
GuC-16.	Q:Insomnia	48	--	--	--	--	--	--	36
GuC-17.	Q:Hurries	--	34	29	--	--	--	-40	40
GuC-18.	Q:Quick in actions	--	81	--	--	--	--	--	67
GuC-19.	Q:Uses up energy	44	--	--	--	--	--	--	23
GuC-20.	Q:Works fast	--	60	--	--	--	--	29	49
GuC-21.	Q:Relaxes easily	55[2]	--	--	--	--	--	--	37
GuC-22.	Q:Talkative	--	45	--	-29	--	--	--	34
GuC-23.	Q:Dislikes interruptions	32	--	--	--	--	--	--	24

---

[1] Seems to include some Rh.

[2] Sign probably in error.

ANALYSIS HJ

Hart, H. H., Jenkins, R. L., Axelrod, S., and Sperling, P. I. Multiple factor analysis of traits of delinquent boys. J. soc. Psychol., 1943, 17, 191-201.

The subjects were 300 boys committed to the New York State Training School for Boys. Nearly all were between 12 and 15 years old; 42% were white, 58% colored. Cases were selected who had a relatively complete case history. Symptoms and types of behavior were mentioned or not mentioned in the records by social workers and psychiatrists. Tetrachoric correlations were used. Analysis was carried out by a "directed" analysis similar to Thurstone's "grouping" method for the first factor. For the other factors analysis was by both this and by the centroid method. Cited here is the data for the centroid analysis where that was used. Rotation was orthogonal, as far as can be judged from the text, except that Temper-assault and Ego-compensation were made to correlate "27° 57'".

HJ

LOADINGS ON ORTHOGONAL FACTORS[1] (II and III correlate)

I. Group Stealing (Directed Analysis)	IV. Street-gang activity
II. Temper-assault	V. Aggressiveness
III. Egoism-compensation	VI. Leadership

	Identifications:	?	E?	Ei	?	Do?	A?
No.	Variable	I	II	III	IV	V	VI
HJ- 1.	C:Cooperative stealing	100	--	--	--	--	--
HJ- 2.	C:Aggressive stealing	81	--	--	--	41	--
HJ- 3.	C:Gang activity	44	26	--	45	--	--
HJ- 4.	C:Delinquent siblings	43	45	-37	--	--	-26
HJ- 5.	C:Submissiveness	--	--	--	--	--	--
HJ- 6.	C:Destructiveness	--	--	--	--	--	-49
HJ- 7.	C:Temper tantrums	--	62	--	--	--	--
HJ- 8.	C:Assaultive tendencies	--	76	--	--	--	--
HJ- 9.	C:Emotional instability	--	56	--	--	--	--
HJ-10.	C:Negativism	--	26	32	--	--	--
HJ-11.	C:Inferiority Feeling	--	--	46	-28	-45	--
HJ-12.	C:Over-aggressiveness	--	--	56	--	--	--
HJ-13.	C:Leadership	--	26	--	--	--	73
HJ-14.	C:Sensitiveness	--	--	--	-27	--	--
HJ-15.	C:Attention-getting behavior	--	--	68	--	--	--
HJ-16.	C:Truancy	--	25	--	43	--	--
HJ-17.	C:Bravado	--	--	50	--	--	--
HJ-18.	C:Passive homosexuality	--	-41	52	--	-35	--
HJ-19.	C:Active homosexuality	--	--	33	--	25	-31
HJ-20.	C:Heterosexuality	--	--	--	--	--	--
HJ-21.	C:Enuresis	--	--	32	--	--	--
HJ-22.	C:Evasiveness	--	--	--	--	--	--
HJ-23.	C:Staying out late at night	--	--	--	54	--	--
HJ-24.	C:Furtive stealing	--	--	--	36	-38	--
HJ-25.	C:Seclusiveness	--	--	--	--	--	-41

---

[1] Communalities not given or computable from the article.

ANALYSIS Ho

Howie, D. Aspects of personality in the classroom: a study of ratings on personal qualities for a group of schoolboys. Brit. J. Psychol., 1945, 36, 15-28.

The subjects were 156 Wiltshire schoolboys and 139 London schoolboys whose average age was about 13 years. The factor analysis was carried out through the extraction of 4 factors by both the principal components and centroid method with nearly identical results. The correlation matrix was also subjected to partialling out of variance with grades and an analysis by Burt's simple summation method with rotation. Only the centroid results after orthogonal rotation are recorded here.

Variables 1-10 consist of teachers' ratings. Each rating was made separately during a week in which the teacher observed for that trait alone. The rating was done by sorting cards each one bearing a student's name. The cards were sorted first into 3 piles, x, y, and z, of 20%, 60%, and 20%. Then each of these piles were sorted into 25%, 50%, and 25%. The nine piles were reduced to seven normally distributed groups by combining the "below average" group for x with the "above average" group for y and the "below average" group for y with the "above average" group for z. Only 2 of the traits are described here by way of example; the rest are named in the table of loadings.

Ho- 3. Common sense. Description on rating schedule: +3 Never at a loss in everyday affairs. -3 Confused and incompetent in everyday problems.

Ho-10. Self consciousness. Description on rating schedule: +3, Easily embarrassed to an uncomfortable degree. Extreme bashfulness. -3, Perfect self-confidence, 'cheekiness'.

Variables 11-13 consist of "buddy" ratings.

Ho-11. Popularity. Each boy expressed his degree of liking for each other boy in the group on a 5-point scale.

Ho-12. Tendency to show fear. Each boy was asked to write down the names of (a) 3 boys in his class who showed the quality in the most marked degree, and (b) 3 boys who showed the quality in the least marked degree. The score was the total number of times mentioned under (a) less the total number of times mentioned under (b).

Ho-13. Tendency to show anger. Same rating system as for Ho-12.

Ho-14. Ascendance-Submission. This was an adaptation of the Allport Ascendancy-Submission Scale.

Ho-15. Examination. This was the score on an "examination at the end of the autumn term."

Ho-16. Burt's Northumberland Scale for general intelligence. Verbal and non-verbal.

Ho

LOADINGS ON ORTHOGONAL FACTORS

I. General personal adequacy
II. Sthenic, assertive quality
III. Quality inducing a favorable attitude on the part of one's fellows
IV. Excitability
V. Not interpreted

	Identifications:	G	Su	?[1]	E?	Do?		
No.	**Variable**	**I**	**II**	**III**	**-IV**	**V**	**h^2**	**R**
Ho- 1.	R:Initiative	74	46	--	--	--	75	77
Ho- 2.	R:Quickness of intelligence	81	--	--	--	--	74	76
Ho- 3.	R:Common sense	73	--	30	--	--	72	80
Ho- 4.	R:Mental activity	92	--	--	--	--	85	83
Ho- 5.	R:Continuity of interest	75	--	39	--	--	74	82
Ho- 6.	R:Perseverance	67	--	45	--	--	68	71
Ho- 7.	R:Cheerfulness	35	60	--	--	--	53	67
Ho- 8.	R:Bodily activity	--	80	--	--	--	73	81
Ho- 9.	R:Excitability	26	42	--	62	--	66	72
Ho-10.	R:Self consciousness	--	-57	44	26	--	62	70
Ho-11.	R:Popularity	30	35	62	-31	--	69	87
Ho-12.	R:Fear	--	-65	--	61	--	83	91
Ho-13.	R:Anger	--	25	-55	-30	--	46	84
Ho-14.	Q:Ascendance	--	33	--	--	68	61	72
Ho-15.	T:Examination	73	--	--	--	-25	67	80
Ho-16.	T:Intelligence Scale	60	--	--	--	--	47	92

---

[1] Possibly a combination of *A* and *Pe*.

ANALYSIS Ko

Koch, H. L. A factor analysis of some measures of the behavior of preschool children. J. gen. Psychol., 1942, 27, 257-287.

Koch, H. L. An analysis of certain forms of so-called "nervous habits" in young children. J. genet. Psychol., 1935, 46, 139-170.

The subjects were 46 nursery school children, 21-58 months old, including 21 boys and 25 girls. They were from above average homes and probably had better than average adjustment and greater homogeneity than the whole population. The measures of behavior tendencies used were obtained by the short behavior sample method. Each child was observed for 400 half minutes, these scattered over eight months of time. No more than 2 half-minute samples of a child's behavior were usually observed in a day, and these at widely separated intervals. One hundred of these short samples were obtained for each child at the school during each of the following situations: The free play period outdoors, the free play period indoors, the period of directed activity or formal circle work (stories, music, rhythms, etc.), and the routines (washing, dressing, etc.). Two observers trained for six weeks, until the better of the two recorded 85 to 100 per cent of the items reported by both. Then the better trained observer worked alone, using a code for recording. This one observer, Miss Helen Streit, was solely responsible for making the records. The score used for each movement mannerism was the number of times the pattern was executed during 400 observation periods. Except for the variable Sex, product-moment correlations were used. Oblique rotation.

Most of the variables are adequately described by the name appearing in the table of loadings. Others calling for additional description are as follows:

Ko-10. Corporal - limited. This was a catch-all for movement patterns presumably functionally similar to those placed in the other classifications but not appropriately referable to these latter because of the body part manipulated. If the child rubbed his stomach or stroked his knee, for instance, these behaviors were referred to this omnibus category.

Ko-15. Acting silly. Acting silly or swaggering in a way that did not employ verbal or vocal activity.

Ko-16. Attention seeking. Indulging in noisy, exaggerated behavior such as laughing loudly or screeching.

Ko-21. Non-participation. Refusing to participate in the formal group work directed by the teacher.

Ko-22. Comply. Complying with the requests of adults or children.

Ko-27. Indirect attack. This was snatching or destroying another's possessions when the latter was not present, doing what was forbidden when the teacher turned her back, etc.

Ko-30. Flit. This was changing the focus of activity in a rather major way at least 3 times in a half minute.

Ko-31. Persistence. Persisting at a task in the face of obvious difficulty.

Ko-32 and 33. Resistance level. Skin resistance level was observed on 2 parallel occasions separated by about 4 weeks. The child was seated in a high chair with an electrode on the sole of one foot and on the corresponding calf. A series of pleasant, unpleasant, and startling stimuli were presented at intervals of 30 seconds. The scores were averages of the readings taken in 1000-ohm units.

Ko-34. Resistance decrease. This was the average relative decrease for all stimulation at both sessions.

Ko-35. Resistance recovery. This was the average relative recovery in resistance after 3 seconds.

Ko-36. Constipation Index. This was a rough measure which took into account the frequency of bowel movements, consistency of faeces, and use of laxatives.

Ko

LOADINGS ON OBLIQUE FACTORS

I. Social extroversion
II. Lack of aggressiveness or even-temper
III. Tension
IV. Apprehensiveness, inhibitedness or femininity
V. Hypersensitivity
VI. Conformity or Conscientiousness
VII. Immaturity
VIII. Autistic tendency
IX. Tendency to become absorbed in thought

	Identifications:	So?	?	?	Mf	?	?	A?	?[1]	?		
No.	Variable	I	II	-III	-IV	V	VI	VII	VIII	IX	h^2	R^2
NERVOUS HABITS												
Ko- 1.	C:Genital	--	--	--	47	--	-30	--	--	--	50	84
Ko- 2.	C:Pedal	--	--	-41	--	--	--	--	-45	-27	47	90
Ko- 3.	C:Ocular	--	--	--	--	--	--	--	--	67	48	77
Ko- 4.	C:Hirsutal-caputal	--	--	--	-43	--	--	--	53	--	50	83
Ko- 5.	C:Oral	--	--	-50	--	--	--	--	--	--	41	95
Ko- 6.	C:Nasal	--	--	--	--	32	--	39	--	--	32	85
Ko- 7.	C:Respiratory	--	55	--	--	--	--	-32	--	--	37	79
Ko- 8.	C:Aural	--	--	--	--	78	--	--	--	--	64	98
Ko- 9.	C:Digital	-34	--	--	--	--	62	--	--	-30	63	79
Ko-10.	C:Corporal-limited	--	41	-50	--	--	--	--	--	--	50	85
Ko-11.	C:Corporal-mass	--	--	-41	--	28	25	--	-26	-28	40	86
Ko-12.	C:Cry and whine	--	--	--	--	--	--	-38	86	--	87	84
Ko-13.	C:Pout and sulk	--	-43	--	--	--	56	--	--	--	48	85
Ko-14.	C:Laugh and smile	39	--	--	31	--	--	--	--	--	50	93
Ko-15.	C:Silly, swaggering	--	--	--	64	--	--	--	--	--	67	87
Ko-16.	C:Attention-seeking	38	--	--	--	--	-35	-32	--	--	71	83
Ko-17.	C:Play alone	-39	--	--	--	--	--	--	--	43	47	74
Ko-18.	C:Day-dream	--	--	--	--	--	--	--	-29	43	42	66
Ko-19.	C:Parallel play	-87	--	--	--	--	--	--	--	--	97	90
Ko-20.	C:Cooperative play	84	--	--	--	--	--	--	--	--	97	99
Ko-21.	C:Non-participation	-55	--	--	--	--	--	-45	--	--	66	86
Ko-22.	C:Comply	41	--	--	--	--	-34	--	--	-58	76	72
Ko-23.	C:Try to boss	65	--	--	-26	--	--	--	--	--	59	72
Ko-24.	C:Talk to self	61	--	--	--	26	--	-26	--	--	74	91
Ko-25.	C:Converse	76	--	--	--	--	--	-29	--	--	94	91
Ko-26.	C:Active attack	--	-31	--	--	--	-36	-33	--	--	83	85
Ko-27.	C:Indirect attack	33	-42	--	--	--	--	--	--	--	45	54
Ko-28.	C:Verbal attack	55	-33	--	--	--	--	--	-39	--	81	86
Ko-29.	C:Refuse and ignore	--	--	--	--	--	--	-64	43	--	64	80
Ko-30.	C:Flit	--	-34	--	--	--	-33	--	--	--	44	52
Ko-31.	C:Persistence	--	--	--	--	--	--	60	--	--	43	58
Ko-32.	C:Resist. level I	--	--	--	58	--	39	--	--	--	62	--
Ko-33.	C:Resist. level II	--	--	--	29	--	--	51	--	--	39	--
Ko-34.	T:Resist. decrease	--	--	--	--	--	--	--	--	--	16	--
Ko-35.	T:Resist. recovery	--	-34	--	--	40	--	--	--	-29	44	--
Ko-36.	C:Constipation	--	--	-66	--	--	--	--	--	--	56	--
Ko-37.	C:Age	37	--	--	--	--	--	35	-53	--	67	--
Ko-38.	C:Sex	--	--	--	58	--	--	--	-33	--	--	--

[1] Maturity

R^2 Odd-even reliability corrected for length

Ko

INTERCORRELATIONS OF THE FACTORS

	I	II	III	IV	V	VI	VII	VIII	IX
I		-12	-16	-36	-08	18	-04	-00	-06
II	-12		04	20	-06	29	30	-00	01
III	-16	04		15	06	-05	22	17	00
IV	-36	20	15		-07	21	08	-07	-01
V	-08	-06	06	-07		-15	-02	-02	14
VI	18	29	-05	21	-15		16	03	14
VII	-04	30	22	08	-02	16		15	12
VIII	-00	-00	17	-07	-02	03	15		04
IX	-06	01	00	-01	14	14	12	04	

ANALYSIS Kr

Kremer, A. H. The nature of persistence. Stud. Psychol. Psychiat., Cathol. U. Amer., 1942, 5, No. 8. Pp.40.

The subjects were 156 boys, 8 to 15 years old, in grades 4 through 7.

Kr- 1. Inkblot I. This test was individually administered. Cards No. 1, 2, 7, 12, and 16 of the Whipple Imagination Cards were given to the subject. Standard directions asking the children to tell what they saw in each blot were used. The time spent on the entire series of cards was taken as the score.

Kr- 2. Inkblot II. For the purpose of making the instructions more clear the test was repeated at a later session with cards 6, 9, and 11. This time the subject was shown No. 16 and was asked to point out the teapot, the hand, and the face. If he failed to see these images, they were pointed out to him. Then he was given the new series of cards and told to point out the things he could find on them. The scoring was done as before.

Kr-3. Puzzle Mastery. This was administered to groups of 5 subjects seated around a table. A model of a 3-dimensional cross made up of 9 pieces of wood was placed on the center of the table. Directions: Now we will do a puzzle. To solve this puzzle you must take the pieces and put them together to make a cross like this one (pointing to the model on the table before them). When you get tired of this and want to quit, bring it up to me, and I will let you try some of the other puzzles I have on that table.

The time spent on the first puzzle only was noted as a measure of persistence. Only 2 subjects succeeded in solving the puzzle.

Kr- 4. Word Building. The subjects were required to make as many words as they could out of the series of letters, EATRDN, LAECKB, and OREMBUNO. They were told that they may hand in their paper when they were through, but to be sure first that there were no more words to get. The score was the time spent working.

Kr- 5. Coding. The coding test was given on another day. This test required the transfer of a lengthy passage into a simple code. Here again, after the directions had been read, the code to be used was explained with demonstrations on the blackboard. Ten minutes after the starting signal was given, the children were again reminded that they need not finish the entire passage. As this was the last paper-pencil test to be administered to the group, the children were told that they might go out to the playground when they turned in their papers. Despite this strong motivation to stop, several subjects spent over an hour at the task until they had finished the entire passage. The score was the time spent working.

Kr- 6. Magic Squares. An example of a 9-cell magic square (where numbers in every row, column, and diagonal add up to the same number) was given on the test paper. The subject was directed to make a similar square, with 4 cells in each direction. After an interval of 10 minutes the subjects were reminded that they were permitted to quit any time they wished and work on their own work. The score was the time spent on the magic square.

Variables 7-23 were ratings of personality traits on a 7-point scale. At least 2, and where possible 3, raters, who were well acquainted with the subjects, were obtained for each class. In the instructions accompanying the rating scale the raters were cautioned to avoid the halo effect. As a further precaution, the scale was so constructed that the entire class was rated simultaneously on one item at a time. The mean of the 2 or 3 ratings was taken as an individual's score on the item.

Kr- 7. Does he keep at a hard task until he succeeds in accomplishing it?

Kr- 8. Does he keep his attention on his lessons in spite of distractions?

Kr- 9. Does he do what everybody else is doing just because they are doing it?

Kr-10. Does he keep his promises?

Kr-11. Can he be trusted to perform errands satisfactorily?

Kr-12. Can he be relied upon to do chores around the school or in the classroom?

Kr-13. Does he get surly when punished?

Kr-14. Does he tend to daydream?

Kr-15. Is he obedient?

Kr-16. Is he shy, bashful, and retiring or nervous in the presence of others?

Kr-17. Does he take the part of a leader or organizer on the playground?

Kr-18. Is he easily led by others?

Kr-19. Is he truthful?

Kr-20. Is he boisterous and active?

Kr-21. Does he mix in readily with other boys in play?

Kr-22. Does he get along well with his companions?

Kr-23. Does he like to boast, brag, or impress others?

Kr-24. Mental Age. Intelligence scores on the Philadelphia Mental Ability Test.

Kr-25. General Average. Average of marks, mostly term examinations, in English, Reading, Spelling, History, Geography, and Arithmetic.

Kr

LOADINGS ON ORTHOGONAL FACTORS

1. Will (Persistence)
2. Stability of character
3. Sense of inferiority and compensation
4. Intelligence
5. Will to community
6. Reliability

No.	Identifications: Variable	Pe?[1] 1	?[2] 2	Ei? 3	G 4	Wi -5	De 6	h^2
Kr- 1.	T:Inkblot I	66	--	--	--	--	--	46
Kr- 2.	T:Inkblot II	81	--	--	--	--	--	67
Kr- 3.	T:Puzzle Mastery	39	34	--	--	--	--	28
Kr- 4.	T:Word-building	25	--	--	--	56	--	41
Kr- 5.	T:Coding	--	--	--	--	53	--	37
Kr- 6.	T:Magic Square	51	--	--	--	28	--	41
Kr- 7.	R:Persists at task	44	55	--	50	--	--	85
Kr- 8.	R:Persists at lessons	59	--	--	58	-30	27	87
Kr- 9.	R:Copies	--	--	29	--	-68	--	58
Kr-10.	R:Keeps promises	--	--	--	49	-37	64	86
Kr-11.	R:Trusted on errands	33	46	--	37	-36	48	81
Kr-12.	R:Does school chores	44	25	51	--	--	65	94
Kr-13.	R:Surly when punished	--	--	--	--	-47	--	26
Kr-14.	R:Daydreams	--	--	57	--	--	26	53
Kr-15.	R:Obedient	38	--	39	--	--	63	71
Kr-16.	R:Shy	--	--	45	33	--	-25	48
Kr-17.	R:Leader	35	40	31	--	-35	53	79
Kr-18.	R:Easily lead	--	--	--	--	-52	--	36
Kr-19.	R:Truthful	--	--	--	48	--	46	50
Kr-20.	R:Boisterous and active	--	--	64	40	--	--	60
Kr-21.	R:Mixes readily	47	--	44	40	-40	--	76
Kr-22.	R:Gets along well	58	--	28	--	--	39	62
Kr-23.	R:Boasts	--	34	58	--	-31	32	66
Kr-24.	T:Mental Age	--	--	-29	66	--	--	54
Kr-25.	T:General Average	59	33	--	54	--	--	75

[1] Pe seems to be combined here with elements of De and So.

[2] There is some Pe here. This factor seems not to be rotated with factor 1 for simple structure or for best psychological meaning.

ANALYSIS La

Layman, E. M. An item analysis of the adjustment questionnaire. J. Psychol., 1940, 10, 87-106.

The experimental group consisted of 276 freshman men enrolled at the University of Iowa.

The Personality Schedule used in the analysis consisted of 51 items selected from 782 items from 16 different personality questionnaires. The selection process included: 1. Weeding out items failing to meet statistical and logical requirements of validity, objectivity, and reliability, and those items dealing with factors other than behavior patterns. The data of other experimenters was used in this process. 2. The remaining 170 items were sorted by judges into piles representing 16 personality traits. The judges rated the diagnostic value of each item for these traits and recommended rejections. 3. The remaining 97 items were used in a preliminary schedule which dropped or combined the original 16 traits to produce 10 criterion groups of items. These included items supposedly measuring sociability, self-sufficiency, feeling of social inadequacy, emotional instability, impulsiveness, egocentricity, and self-consciousness. 4. This preliminary schedule was given to the experimental group and biserial correlations were made between each test item and each of the 10 criterion groups. All items having no biserials above .39 or more than 10% "?" responses were eliminated. 5. A separate factor analysis was made for the items in each of the 9 criterion groups. The other one, self-consciousness, was omitted, since all of the items included in this group were found in other groups. After rotation of these factor matrices all items having loadings of .50 or more for one or more factors were combined in the final matrix. This included 51 items. Tetrachoric correlations were used.

The reliabilities noted with the items are those obtained for 40 graduate students who took the test twice with an interval of 3 weeks.

La- 1. Have you preferred being alone most of the time? $R_t = 82$.

La- 2. Do you feel that people are secretly talking about you? $R_t = 97$.

La- 3. Do you usually plan out your work carefully before you begin it? $R_t = 94$.

La- 4. Do you often say things on the spur of the moment and then regret them? $R_t = 70$.

La- 5. Does it bother you to have people watch you at work even when you do it well? $R_t = 89$.

La- 6. Do you tend to be slow and deliberate in your movements? $R_t = 88$.

La- 7. Are you troubled with the idea that people on the street are watching you? $R_t = 81$.

La- 8. Are you inclined to be suspicious of the motives of others? $R_t = 82$.

La

La- 9. Do you usually understand a problem better by studying it out alone than by discussing it with others? $R_t = 40$.

La-10. Do you make new friends easily? $R_t = 51$.

La-11. Are you inclined to keep quiet when out in a social group? $R_t = 38$.

La-12. Do you care much for parties or dances? $R_t = 88$.

La-13. Do you usually enjoy spending an evening alone? $R_t = 64$.

La-14. Do you prefer to work things out in your own way rather than to accept suggestions from others? $R_t = 16$.

La-15. Do you enjoy being in a crowd just to be with people? $R_t = 64$.

La-16. Do you enjoy taking part in many social affairs? $R_t = 36$.

La-17. Are you greatly embarrassed if you have greeted a stranger whom you have taken for an acquaintance? $R_t = 41$.

La-18. Do you usually prefer to do your own planning alone rather than with others? $R_t = 32$.

La-19. Are you inclined to limit your acquaintances to a select few? $R_t = 87$.

La-20. Do you often have difficulty in thinking of an appropriate remark to make in group conversation? $R_t = 70$.

La-21. Do you like to be by yourself a great deal? $R_t = 84$.

La-22. Do you feel embarrassed when you have to enter a public assembly after everyone else has been seated? $R_t = 48$.

La-23. Do you enjoy getting acquainted with most people? $R_t = 48$.

La-24. Do you like to be with other people a great deal? $R_t = 43$.

La-25. Do you have difficulty in starting conversation with a stranger? $R_t = 80$.

La-26. Do you have frequent ups and downs in mood either with or without apparent reason? $R_t = 67$.

La-27. Have you, in the past five years, been active in organizing any clubs, teams, or other such groups? $R_t = 84$.

La-28. Are you easily moved to tears? $R_t = 84$.

La-29. Do you ever try to argue or bluff your way past a guard or doorman? $R_t = 19$.

La-30. Do you frequently have spells of the "blues" for no good reason? $R_t = 81$.

La-31. Do you ever upbraid a workman who fails to have your work done on time? $R_t = 59$.

La-32. Are you often in a state of excitement? $R_t = 75$.

La-33. Do you get "rattled" easily in exciting situations, or at critical moments? $R_t = 39$

La-34. Do you often feel "just miserable" for no reason at all? $R_t = 61$.

La-35. Do you ever "heckle" a public speaker? $R_t = 61$.

La-36. Do you experience many pleasant or unpleasant moods? $R_t = 58$.

La-37. Do you consider youself less emotional than the average person, that is, less easily upset? $R_t = 67$.

La-38. Are you inclined to keep in the background on social occasions? $R_t = 20$.

La-39. Do your interests change rapidly? $R_t = 83$.

La-40. Do you hesitate to put your abilities to the test? $R_t = 30$.

La-41. Does it bother you to have an unfinished job on your hands? $R_t = 30$.

La-42. Do you feel self-conscious in the presence of superiors? $R_t = 70$.

La-43. Do you tend to day-dream instead of doing your work? $R_t = 68$.

La-44. Are you easily discouraged when the opinions of others differ from your own? $R_t = 74$.

La-45. Does it make you uncomfortable to be "different" or unconventional? $R_t = 23$.

La-46. Do you feel self-conscious in front of strangers or a large crowd? $R_t = 34$.

La-47. Do you work by fits and starts? $R_t = 94$.

La-48. Does it bother you a great deal to know that people are saying disparaging things about you? $R_t = 85$.

La-49. Are you, in general, self-confident about your abilities? $R_t = 83$.

La-50. Do you prefer to work alone rather than with people? $R_t = 06$.

La-51. Do you find it difficult to get rid of a salesman? $R_t = 92$.

LOADINGS ON ORTHOGONAL FACTORS

I. Feeling of Social Inadequacy
II. Gregariousness
III. Social Initiative--Active Sociability
IV. Social Aggressiveness
V. Independence in Working and Planning
VI. Impulsive in Action
VII. Changeability of Interest
VIII. Emotionality A--Moodiness
IX. Feeling of Inferiority--Lack of Self-Confidence
X. Emotionality B--Emotional Sensitivity
XI. Emotionality C--Emotional Introversion
XII. Inability to Meet Demands of Reality

No.	Identifications: Variable	Sn I	Gs II	So III	Do IV	Ss V	Mp VI	Pe -VII	Cd VIII	Sc -IX	E X	Au XI	Ne XII	h^2
La- 1.	Q:Likes to be alone	--	-60	-39	--	38	--	--	--	--	--	--	--	79
La- 2.	Q:People talk	45	--	--	--	--	--	--	51	--	30	--	--	58
La- 3.	Q:Plans carefully	--	--	--	--	--	-58	--	--	--	--	--	--	45
La- 4.	Q:Regrets saying things	--	--	--	--	--	48	--	25	--	--	--	--	50
La- 5.	Q:Dislikes people watching	62	--	--	--	--	--	--	--	-30	--	--	--	69
La- 6.	Q:Slow and deliberate	--	--	-48	--	--	--	--	--	--	--	--	--	38
La- 7.	Q:People watch	60	--	--	--	--	--	--	--	--	30	--	--	58
La- 8.	Q:Suspicious of motives	39	--	--	--	--	--	25	55	-34	--	--	--	76
La- 9.	Q:Studies problems alone	--	-30	--	--	55	--	--	--	--	--	--	--	56
La-10.	Q:Makes friends easily	-34	--	67	--	35	--	--	--	--	--	--	--	78
La-11.	Q:Keeps quiet when out	35	-35	-56	--	--	--	--	--	--	--	35	--	78
La-12.	Q:Likes parties	--	82	25	26	--	--	--	--	--	--	--	--	86
La-13.	Q:Likes evening alone	--	-67	--	--	28	--	--	--	--	--	--	--	70
La-14.	Q:Works things out alone	--	-25	--	--	65	--	--	--	--	--	--	--	62
La-15.	Q:Likes crowds	--	62	--	--	--	--	--	--	--	--	-26	--	50
La-16.	Q:Likes social affairs	-25	62	35	--	--	--	--	--	25	--	-35	--	85
La-17.	Q:Embarrassed greeting	63	--	--	--	--	--	--	--	--	--	--	--	51
La-18.	Q:Plans alone	--	-25	--	--	68	--	--	--	--	--	--	--	56
La-19.	Q:Limits acquaintances	25	-63	--	--	28	--	--	--	-25	--	--	--	70
La-20.	Q:Hard to talk in group	65	--	-34	--	--	--	--	--	--	--	28	--	70
La-21.	Q:Likes to be alone	28	-70	-39	--	--	--	--	--	--	--	--	--	79
La-22.	Q:Embarrassed entering	88	--	--	--	--	--	--	--	--	--	--	--	92
La-23.	Q:Likes meeting	-25	64	25	--	--	--	--	--	--	--	--	--	68
La-24.	Q:Likes to be with people	--	76	--	--	--	--	--	--	--	--	--	--	80
La-25.	Q:Hard to converse	50	--	-45	--	--	--	--	--	--	--	43	--	69
La-26.	Q:Ups and downs in mood	--	--	--	--	--	--	--	82	--	--	--	--	78
La-27.	Q:Organizes clubs	--	--	56	--	--	--	--	--	--	--	--	--	48
La-28.	Q:Cries easily	28	--	--	--	--	--	--	--	-32	52	--	--	62
La-29.	Q:Bluffs doormen	--	--	--	61	--	--	--	--	--	--	--	--	43
La-30.	Q:Has blues	--	--	--	--	--	25	--	80	--	29	--	32	92
La-31.	Q:Upbraids workman	--	--	--	51	--	--	--	--	--	--	--	--	29
La-32.	Q:State of excitement	25	--	--	--	--	--	--	--	--	40	--	55	63
La-33.	Q:Rattled easily	33	--	--	--	--	--	--	26	-30	--	--	59	74
La-34.	Q:Often miserable	--	--	--	--	--	--	--	81	--	34	--	--	92
La-35.	Q:Heckles speakers	--	--	--	55	--	--	--	--	--	--	--	--	45
La-36.	Q:Moody	--	--	--	--	--	--	-30	74	--	--	--	40	99
La-37.	Q:Less emotional	--	--	--	--	--	--	--	--	--	-70	--	--	56
La-38.	Q:Keeps in background	35	-36	-54	--	--	--	--	--	--	--	30	--	70
La-39.	Q:Interests change	--	--	--	--	--	--	-58	30	--	--	--	--	45
La-40.	Q:Hesitates to try	45	--	--	--	--	--	--	28	-52	--	--	--	62
La-41.	Q:Dislikes unfinished job	--	--	--	--	--	--	--	--	--	--	--	55	33
La-42.	Q:Self-conscious superiors	38	--	-25	--	--	--	--	--	-50	--	--	36	63
La-43.	Q:Day-dreams	--	--	--	--	--	--	--	40	--	--	50	39	70
La-44.	Q:Easily discouraged	52	--	--	--	--	--	--	--	-53	--	--	30	73
La-45.	Q:Likes to be same	51	--	--	--	--	--	--	--	-29	30	--	--	54
La-46.	Q:Self-conscious crowd	68	--	--	--	--	--	--	--	--	27	--	--	75
La-47.	Q:Works by fits and starts	--	--	--	--	--	38	--	27	-42	--	--	--	54
La-48.	Q:Dislikes criticism	51	--	--	--	--	--	--	--	--	28	--	--	51
La-49.	Q:Self-confident	--	--	--	--	--	--	--	--	62	--	--	-30	50
La-50.	Q:Works alone	--	-48	--	--	42	--	--	--	--	--	--	--	45
La-51.	Q:Hard to get rid	25	--	--	--	--	--	--	--	-51	--	--	--	48

ANALYSIS Lo

Lovell, C. A study of the factor structure of thirteen personality variables. Educ. psychol. Meas. 1945, 5, 335-350.

The subjects were 200 psychology students in 4 college classes: 122 men and 78 women between the ages of 18 and 32. Two sets of factors were extracted. The first used the largest correlation in a column as the diagonal entry. Since these were not found to be sufficiently close to the values of h^2 obtained, the obtained values of h^2 were used as diagonals in the second extraction reported here. Since the variables are already factor scores, the factors found in this analysis are considered to be super-factors.

The variables were the 13 measured by Guilford's Inventory of Factors S T D C R, the Guilford-Martin Inventory of Factors G A M I N, and the Guilford-Martin Personnel Inventory I. These are all self-inventories of the yes-?-no type. The students were told that the results would not affect their course grades. In cases where the number of items with "yes" indicating a positive score is badly out of balance by the number of items with "no" indicating a positive score, these numbers are given.

Lo- 1. S, Social Extraversion - Introversion. Sociability, tendency to seek social contacts, to enjoy company of others vs. Shyness, seclusiveness, tendency to withdraw from social contacts. Sample items: Limits acquaintances to a select few, keeps quiet in social groups, difficulty in starting conversation with strangers, frequent loneliness, spends evenings alone, takes life seriously, bashfulness, lets others take the lead.

Lo- 2. T, Thinking Extraversion - Introversion. Extravertive orientation in thinking vs. Inclination to meditative or reflective thinking, philosophizing, analyzing one's self and others. Sample items: Analyzes motives of others, ponders over the past, takes life seriously, works on complicated problems, often lost in thought, much attention to details, often moody, works better when praised.

Lo- 3. D, Freedom from Depression. Cheerfulness and optimism vs. Habitually gloomy, pessimistic mood, feelings of guilt. Sample items: Often moody, self-conscious, daydreams frequently, often worries, frequent ups and downs in mood, feelings easily hurt, loneliness, difficulty in making decisions, feelings of inferiority, often excited.

Lo- 4. C, Emotional Stability. Uniformity in mood, evenness of disposition vs. Strong emotional fluctuations, tendency toward flightiness, emotional instability. (68 yes, 5 no.) Sample items: Moody, acts on the spur of the moment, works better when praised, changes work frequently, daydreams, worries, ups and downs in mood, feelings easily hurt, impulsive, interests change quickly, lonely, high-strung, absent-minded.

Lo- 5. R, Rhathymia. Happy-go-lucky, carefree disposition, lively, impulsive vs. inhibited, over-controlled, conscientious, serious-minded.
Sample items: Carefree, acts on spur of the moment, impulsive, craves excitement, jumps at conclusions, lively, plays pranks on others, restless.

Lo- 6. G, General activity. General pressure for vigorous activity. (21 yes, 3 no.)
Sample items: Quick in actions, eats rapidly, walks fast, "on the go," starts work with enthusiasm, hurries, talkative, impulsive, daredevil, group leader.

Lo- 7. A, Ascendance - Submission. Social leadership.
Sample items: Easily starts conversation with strangers, good at bluffing, organizer, takes social initiative, likes public speaking, takes responsibility, takes charge in case of accident, stands up for his rights, a good salesman.

Lo- 8. M, Masculinity - Femininity. Positive: Masculinity in emotional and temperamental make-up.
Sample items: Wants to be physically strong, not afraid of the dark, likes hunting, likes to take a chance, not afraid of deep water, not sorry for underdog, not afraid of snakes, preference for mathematics, science, politics, building trades, mining, prize fights, rather than literature, music, flowers, art, dancing.

Lo- 9. I, Freedom from Inferiority feelings. Self-confidence and lack lack of inferiority feelings vs. lack of confidence, underevaluation of one's self, feelings of inadequacy.
Sample items: Often feels thwarted, bossed around too much, often bored, slow emotional recovery from emotional upset, awkward, craves encouragement, absent-minded, unpopular, easily discouraged, slow in making decisions.

Lo-10. N, Freedom from Nervousness. Calm, unruffled, relaxed vs. Jumpiness, jitteriness, easily distracted, irritated, easily annoyed. (5 yes, 38 no.)

Lo-11. O, Objectivity. Tendency to view one's self and surroundings objectively and dispassionately vs. tendency to take everything personally, hypersensitive, easily upset, nervous, disturbed by criticism, readily unburdens his troubles to others, easily offended, or annoyed. (2 yes, 45 no.)

Lo-12. Ag, Agreeableness. Lack of quarrelsomeness and a lack of domineering qualities vs. beligerance, readiness to fight over trifles, does not like to take instructions from others, feels that most people are stupid, hates to lose an argument, dislikes many people, takes pleasure in bossing people, selfish, frequently in conflict, contempt for opinions of others, self-confident about his own abilities, "hard-boiled." (2 yes, 36 no.)

Lo-13. Co, Cooperativeness. Willingness to accept things and people as they are and a generally tolerant attitude vs. Lack of faith in people, believes most people shirk their duties, dislikes his superiors, against large business corporations, dislikes traffic regulations, distrustful of all successful people. (4 yes, 56 no.)

LOADINGS ON ORTHOGONAL "SUPER"-FACTORS

I. Drive-restraint
II. Realism
III. Emotionality
IV. Social Adaptability
V. Doublet
VI. Doublet

No.	Identifications: Variable	So? I	E? -II	Cd? -III	A IV	? V	? VI	h^2	R^2
Lo- 1.	Q:Social Extraversion	70	--	-42	--	25	39	90	90
Lo- 2.	Q:Thinking Extraversion	--	--	-63	--	47	--	65	84
Lo- 3.	Q:Freedom from Depression	--	-44	-81	--	--	--	95	94
Lo- 4.	Q:Emotional Stability	--	-48	-84	--	--	--	96	88
Lo- 5.	Q:Rhathymia	71	--	--	--	44	--	71	90
Lo- 6.	Q:General Activity	73	--	--	--	--	--	64	89
Lo- 7.	Q:Ascendance	70	-38	--	--	--	37	79	88
Lo- 8.	Q:Masculinity	--	-58	--	--	--	--	36	85
Lo- 9.	Q:Freedom from Inferiority	38	-54	-45	--	--	26	76	91
Lo-10.	Q:Freedom from Nervousness	--	-54	-49	35	--	26	73	89
Lo-11.	Q:Objectivity	25	-60	-47	42	--	--	82	83
Lo-12.	Q:Agreeableness	--	--	-33	75	--	--	68	80
Lo-13.	Q:Cooperativeness	--	-36	-25	69	--	--	68	91

[1] Since each variable covers a factorial area, these factors all tend to be combinations.

[2] These are the reliabilities published in the manuals.

ANALYSIS Lu

Lurie, W. A. A study of Spranger's value-types by the method of factor analysis. J. soc. Psychol., 1937, 8, 17-37.

The subjects were 203 white freshmen and sophomores at the University of Chicago. Almost all were either 18 or 19 years old. 128 were men; 75 were women. There were 79 Protestants, 55 Jews, 49 professing no religion, 18 Catholics, and 2 Greek Orthodox. The parents of the subjects were professional or business and white-collar workers in about equal proportions, with a scattering of artisans and laborers.

The test items included 24 for each of Spranger's 6 types. Among the 24 were 6 for interests, 6 for ideals, 6 for preferences in people, and 6 for beliefs. The material was similar to that used by Allport and Vernon (see Analysis Du). The subjects used a 7-point scale. A score of zero was assigned to every item marked by the subject in the "Complete Rejection" column, 1 for "Strong Disapproval," and so on, consecutively, to 6 for "Complete Acceptance." 24 scores were computed for each individual, a theoretical interests score being computed by adding the acceptance ratings on the 6 items of the theoretical type in the class of interests, a theoretical ideals score by adding scores for the 6 theoretical ideals items, and similarly for the 6 types of items in each of the 4 classes. Tetrachoric correlations were used.

Samples of the test items (not variables) and the key appear below. To the right of the items the test included 7 vertical columns for the subjects' check marks.

	Key
1. Granting that you had the necessary ability and training, indicate how much you would like to teach each of these subjects:	interests
a. Modern Poetry	A
b. Algebra	T
c. Comparative Religions	R
3. To what extent does each of the following possible ends of scientific research appeal to you as an important object:	beliefs
a. Increase sum total of human happiness	S
b. Increase power of civilized nations	P
c. Increase wealth	E
4. Granting ability and opportunity, to what extent do these careers attract you, assuming that any can satisfy your material need:	ideals
a. Missionary	R
b. Musician	A
c. Clinic Assistant	S
6. To what extent do these famous personages appeal to you, because of what they seem to embody in their lives and work:	preferences in people
a. Croesus	E
b. Socrates	S
c. Robert Fulton	E

Lu

11. Do you like to associate with people who are:	Key preferences in people
a. Able to help you along	E
b. Successful and eminent	P
c. Interested in beautiful things	A

LOADINGS ON ORTHOGONAL FACTORS

- I. Social and altruistic
- II. Philistine (aggressive, go-getting, utilitarian, anti-cultural)
- III. Theoretical
- IV. Religious: doctrine and practice
- V. Open-mindedness
- VI. Practicality
- VII. Aestheticism resulting from social pressure

No.	Variable[1]	Identifications: Iw I	Ib II	Is III	Ir IV	? V	? VI	Ie VII	h^2
Lu- 1.	IJ:Theoretical interests	--	--	77	--	52	--	--	77
Lu- 2.	IJ:Theoretical ideals	--	--	80	--	--	--	--	82
Lu- 3.	IJ:Theoretical preferences	--	--	72	--	--	--	--	82
Lu- 4.	IJ:Theoretical beliefs	27	-26	49	--	47	--	--	62
Lu- 5.	IJ:Economic interests	--	59	--	--	--	--	--	60
Lu- 6.	IJ:Economic ideals	--	48	29	--	28	--	--	71
Lu- 7.	IJ:Economic preferences	--	34	--	--	--	--	--	49
Lu- 8.	IJ:Economic beliefs	--	35	--	-47	--	42	--	59
Lu- 9.	IJ:Aesthetic interests	--	-59	--	--	--	--	64	78
Lu-10.	IJ:Aesthetic ideals	51	--	--	--	--	--	--	66
Lu-11.	IJ:Aesthetic preferences	--	-47	--	--	--	--	45	71
Lu-12.	IJ:Aesthetic beliefs	43	-47	--	--	--	--	--	59
Lu-13.	IJ:Social interests	60	--	-30	--	44	--	--	69
Lu-14.	IJ:Social ideals	49	--	--	--	39	--	--	65
Lu-15.	IJ:Social preferences	29	--	--	--	--	--	--	81
Lu-16.	IJ:Social beliefs	41	--	--	--	--	--	--	61
Lu-17.	IJ:Political interests	32	55	--	--	--	--	--	77
Lu-18.	IJ:Political ideals	--	59	--	--	--	--	--	76
Lu-19.	IJ:Political preferences	-43	25	--	--	--	35	--	52
Lu-20.	IJ:Political beliefs	--	26	--	--	34	--	--	65
Lu-21.	IJ:Religious interests	--	--	--	34	--	--	--	53
Lu-22.	IJ:Religious ideals	--	--	--	69	--	-32	--	92
Lu-23.	IJ:Religious preferences	--	--	--	43	-32	--	--	82
Lu-24.	IJ:Religious beliefs	--	--	--	25	--	--	--	76

---

[1] These variables combine interest and attitude material, therefore the symbol IJ is used with them.

ANALYSIS LW

Lorr, M., Wittman, P., and Schanberger, W. An analysis of the Elgin prognostic scale. J. clin. Psychol., 1951, 7, 260-263.

The subjects were 200 successive admissions at the Elgin State Hospital rated on the Elgin Prognostic Scale by one of the authors and a psychiatrist. The Elgin Scale is a rating schedule designed to predict recovery in schizophrenics. It consists of 20 rating scales weighted according to prognostic importance; favorable factors are arbitrarily assigned negative weights. The prognostic score is the algebraic sum of the weighted measures. The variables are in large part based upon premorbid social history secured from the patient's relatives. Tetrachoric correlations were used for 17 of the 20 scale variables. The names of the scales are given in the table of loadings.

LOADINGS ON OBLIQUE FACTORS

X. Schizoid Withdrawal
Y. Schizophrenic Reality Distortion
Z. Personality Rigidity or Inadaptability

	Identifications:	Pc?[1]	?[2]	Dt	
No.	Variable	X	Y	Z	h^2
LW- 1.	R:Shut-In Personality	86	--	--	77
LW- 2.	R:Schizothymic Personality	85	32	--	81
LW- 3.	R:Defects of Interest	93	--	--	90
LW- 4.	R:Lack of Heterosexual Contacts	65	--	--	57
LW- 5.	R:Inadequate Affect	47	43	40	53
LW- 6.	R:Limited Range of Interests	81	36	26	87
LW- 7.	R:Insidious Onset	87	35	--	95
LW- 8.	R:Long Duration of Psychoses	41	56	27	50
LW- 9.	R:Careless Indifference	--	--	84	82
LW-10.	R:Stubborn Traits	--	--	84	76
LW-11.	R:Low Energy Tone	70	--	--	54
LW-12.	R:Constitutional Bias	73	--	--	58
LW-13.	R:Ideas of Influence	--	79	--	63
LW-14.	R:Bizarre Delusions	--	65	--	47
LW-15.	R:Hebephrenic Symptoms	41	59	--	51
LW-16.	R:Absence of Atypical Symptoms	57	60	--	67
LW-17.	R:Asthenic Build	68	38	--	59

[1] Factor Pc includes cycloid as well as schizophrenic characteristics.

[2] Schizophrenic reality distortion.

INTERCORRELATIONS OF FACTORS

	X	Y	Z
X.		-09	18
Y.	-09		-31
Z.	18	-31	

ANALYSIS MD

McNamara, W. J. and Darley, J G. A factor analysis of test-retest performance on attitude and adjustment tests. J. educ. Psychol., 1938, 29, 652-664.

During the academic year 1935-1936, 326 men and 217 women in the General College, University of Minnesota, were tested on a battery of attitude and adjustment questionnaires and retested over an average interval of 9.2 months. For this study 100 men were selected at random from these larger groups. Mean and standard deviations of scores indicated that the small sample was representative. A separate analysis was carried out for 100 men, the same 100 men retested, 100 women and the same 100 women retested. The factorial results are similar. Only the analysis of the first test for 100 men is reported here.

LOADINGS ON ORTHOGONAL FACTORS

- I. Generalized respect for and adjustment to authority
- II. Socialized interests and socially skillful or adequate behavior
- III. Familial adjustment
- IV. Neurotic tendencies
- V. Specific

No.	Variable[1] Identifications:	A? I	So? II	?[2] III	E IV	? V	h^2	R[4]	R_t[3]
MINNESOTA SCALE FOR SURVEY OF OPINIONS:									
MD- 1.	J:Morale	68	38	--	--	--	65	74	65
MD- 2.	J:Inferiority	34	68	--	--	--	58	81	61
MD- 3.	J:Family	45	--	69	--	--	69	81	64
MD- 4.	J:Law	62	--	--	--	-	43	77	55
MD- 5.	J:Economic conservatism	--	--	--	--	62	44	87	79
MD- 6.	J:Education	70	--	--	--	--	50	66	46
MD- 7.	J:General adjustment	81	27	--	--	33	89	77	61
BELL ADJUSTMENT INVENTORY:									
MD- 8.	Q:Home	--	--	47	45	--	46	79	71
MD- 9.	Q:Health	--	--	33	46	--	32	72	72
MD-10.	Q:Social	--	81	--	--	--	79	90	84
MD-11.	Q:Emotional	--	31	--	74	--	69	80	68
MINNESOTA INVENTORIES OF SOCIAL ATTITUDES:									
MD-12.	Q:Social Preferences	--	33	51	--	34	49	91	73
MD-13.	Q:Social Behavior	--	69	31	--	26	64	90	65

---

[1] All variables are taken as positive in the favorable direction.

[2] Familial adjustment.

[3] Correlation between scores used for the analysis in this table and those for the same subjects retested.

[4] Odd-even reliability corrected for length.

ANALYSIS ML

Marzoff, S. S. and Larsen, A. H. Statistical interpretation of symptoms illustrated with a factor analysis of problem check list items. Educ. psychol. Meas., 1945, 5, 285-294.

The Mooney Problem Check List was given to 205 upper classmen in Illinois State Normal University. This instrument consists of 330 items about which students might worry. In using the instrument the student is asked to underline those items about which he worries. The 10 most frequently underlined items were intercorrelated using tetrachoric correlations. Oblique rotation (as well as orthogonal).

LOADINGS ON OBLIQUE FACTORS

I. Lack of self-confidence II. Lack of integration

No.	Identifications: Variables	Sc I	?[1] II	h^2
ML- 1.	Q:Wondering if I'll be successful in life.	-81	--	64
ML- 2.	Q:Wanting a more pleasing personality.	-55	--	32
ML- 3.	Q:Lack of self-confidence.	-77	--	56
ML- 4.	Q:Afraid to speak up in class discussion.	-43	--	20
ML- 5.	Q:Disliking financial dependence on family.	-32	--	15
ML- 6.	Q:Taking things too seriously.	-25	37	25
ML- 7.	Q:Not enough sleep.	--	65	40
ML- 8.	Q:Too little chance to read what I like	--	61	38
ML- 9.	Q:Not enough time for recreation.	--	61	36
ML-10.	Q:Restless at delay in starting life work.	--	--	05

[1] This may reflect actual over-worked situation rather than any personality characteristic.

The correlation between factors I and II is .26.

ANALYSIS Mo

Mosier, C. I. A factor analysis of certain neurotic tendencies. Psychometrika, 1937, 2, 263-287.

This study used the items of the Thurstone Neurotic Inventory. Three of the items were dropped from the analysis, since they had consistently low correlations with the other items and among themselves. The score on the A.C.E. Psychological Examination was also used in the analysis. The subjects were 500 male students of the University of Florida. About 100 in the group tested are not included among the 500 used, since they had answered more than 3 items with "?". The few responses of "?" were considered to be "not neurotic" and tetrachoric correlations were used.

Mo- 1. Do you get stage fright?

Mo- 2. Do you have difficulty in starting conversation with a stranger?

Mo- 3. Do you worry too long over humiliating experiences?

Mo- 4. Do you often feel lonesome, even when you are with other people?

Mo- 5. Do you consider yourself a rather nervous person?

Mo- 6. Are your feelings easily hurt?

Mo- 7. Do you keep in the background on social occasions?

Mo- 8. Do ideas run through your head so that you cannot sleep?

Mo- 9. Are you frequently burdened by a sense of remorse?

Mo-10. Do you worry over possible misfortune?

Mo-11. Do your feelings alternate between happiness and sadness without apparent reason?

Mo-12. Are you troubled with shyness?

Mo-13. Do you day-dream frequently?

Mo-14. Do you get discouraged easily?

Mo-15. Do your interests change quickly?

Mo-16. Does it bother you to have people watch you at work, even when you do it well?

Mo-17. Can you stand criticism without feeling hurt?

Mo-18. Do you have difficulty making friends?

Mo-19. Are you troubled with the idea that people are watching you on the street?

Mo-20. Does your mind often wander badly so that you lose track of what you are doing?

Mo-21. Have you ever been depressed because of low marks in school?

Mo-22. Are you touchy on various subjects?

Mo-23. Are you often in a state of excitement?

Mo-24. Do you frequently feel grouchy?

Mo-25. Do you feel-self-conscious when you recite in class?

Mo-26. Do you often feel just miserable?

Mo-27. Does some particular useless thought keep coming into your mind to bother you?

Mo-28. Do you hesitate to volunteer in a class recitation?

Mo-29. Are you frequently in low spirits?

Mo-30. Do you often experience periods of loneliness?

Mo-31. Do you often feel self-conscious in the presence of superiors?

Mo-32. Do you lack self-confidence?

Mo-33. Do you find it difficult to speak in public?

Mo-34. Do you often feel self-conscious because of your personal appearance?

Mo-35. Do you feel that you must do a thing over several times before you leave it?

Mo-36. Are you troubled with feelings of inferiority?

Mo-37. Do you often find that you cannot make up your mind until the time for action has passed?

Mo-38. Do you have ups and downs in mood without apparent cause?

Mo-39. Are you in general self-confident about your abilities?

Mo-40. Above the median, A.C.E. Psychological Examination.

Mo

LOADINGS ON ORTHOGONAL FACTORS

C. Cycloid
D. Depression
H. Hypersensitivity
I. Inferiority

S. Social Introversion
P. Public-speaking
Co. Cognitive Defect?
Au. Autistic Tendency?

	Identifications:	Cd	Lo	E	Sc	So	Sn	G?	Au		
No.	Variable	C	D	H	-I	-S	P	-Co	Au	h^2	R[1]
Mo- 1.	Q:Stage fright	--	--	--	-25	--	77	--	--	74	95
Mo- 2.	Q:Difficulty conversing	--	--	--	--	-57	35	--	--	53	91
Mo- 3.	Q:Humiliation	25	--	38	--	-30	--	--	--	36	87
Mo- 4.	Q:Lonesome with people	--	68	--	--	--	--	--	47	72	88
Mo- 5.	Q:Nervous	--	--	45	--	--	--	--	--	36	97
Mo- 6.	Q:Easily hurt	25	--	52	--	--	--	--	--	38	93
Mo- 7.	Q:Keep in background	--	28	--	--	-67	--	--	--	56	92
Mo- 8.	Q:Ideas run in head	--	--	26	--	--	--	--	47	36	88
Mo- 9.	Q:Sense of remorse	30	27	--	--	--	--	--	48	45	58
Mo-10.	Q:Worries	41	--	--	--	-25	--	--	32	38	74
Mo-11.	Q:Moody	81	--	--	--	--	--	--	27	76	87
Mo-12.	Q:Shyness	--	--	--	--	-71	36	--	--	69	88
Mo-13.	Q:Day-dreams	--	--	--	--	--	--	--	62	45	91
Mo-14.	Q:Easily discouraged	--	--	40	-50	--	--	-25	--	54	85
Mo-15.	Q:Interests change	29	--	--	--	--	--	--	--	28	87
Mo-16.	Q:Dislikes being watched	--	--	--	--	-48	--	-27	-	38	89
Mo-17.	Q:Dislikes criticism	--	--	47	-31	--	--	--	--	39	83
Mo-18.	Q:Slow making friends	--	50	--	-30	-42	--	36	--	72	93
Mo-19.	Q:Watched on street	--	--	--	--	-48	--	--	46	53	91
Mo-20.	Q:Mind wanders	26	--	--	-35	--	--	-25	--	30	82
Mo-21.	Q:Depressed by marks	--	--	--	--	--	--	-55	--	39	90
Mo-22.	Q:Touchy	--	--	--	--	--	--	-35	--	27	85
Mo-23.	Q:Excitement	29	--	42	--	--	--	--	34	42	86
Mo-24.	Q:Grouchy	39	35	31	--	--	--	--	--	44	79
Mo-25.	Q:Self-con. reciting	--	--	--	--	-28	72	--	--	66	88
Mo-26.	Q:Just miserable	43	56	30	--	--	--	--	--	67	83
Mo-27.	Q:Useless thoughts	25	--	--	--	--	--	-51	40	49	77
Mo-28.	Q:Hesitate to volunteer	--	--	--	--	-32	50	-33	--	49	92
Mo-29.	Q:Low spirits	51	59	--	--	--	--	--	--	70	79
Mo-30.	Q:Loneliness	--	71	--	--	--	--	--	49	80	84
Mo-31.	Q:Self-con. superiors	--	--	--	-29	-46	42	--	--	53	82
Mo-32.	Q:Lack self-confidence	--	--	--	-66	-50	--	--	--	77	91
Mo-33.	Q:Difficult to speak	--	--	--	-28	--	80	--	--	76	93
Mo-34.	Q:Self-con. appearance	--	--	--	--	-34	--	--	48	39	86
Mo-35.	Q:Must repeat	--	--	--	--	--	--	-27	--	15	81
Mo-36.	Q:Inferiority feelings	--	--	--	-42	-60	--	--	--	62	88
Mo-37.	Q:Can't make up mind	32	--	26	--	-31	--	--	--	36	90
Mo-38.	Q:Ups and downs	85	--	--	--	--	--	--	25	85	86
Mo-39.	Q:Not self-confident	--	--	--	-58	-52	--	--	--	64	78
Mo-40.	T:Intelligence	--	--	--	--	--	--	43	--	31	--

[1] Correlation with results on same test given one week later.

ANALYSIS No

North, R. D., Jr. An analysis of the personality dimensions of introversion-extroversion. *J. Personality*, 1949, *17*, 352-368.

The subjects were 155 men and 15 women students at Columbia University ranging in age from 19 to 38. All of the subjects filled out the Guilford Inventory of Factors STDCR and the Kuder Preference Record, and took the Army General Classification Test. The analysis was carried out on the Guilford Inventory only. An analysis of the contribution of items in the inventory was made. The following descriptions of the variables adapted from the manual appear in this article:

No- 1. *S-Social Introversion-Extroversion*. A high score indicates shyness, a tendency to withdraw from social situations and to be seclusive. Low scores indicate sociability, a tendency to seek social contacts and to enjoy the company of others.

No- 2. *T-Thinking Introversion-Extroversion*. A high score indicates an inclination to meditative thinking, philosophizing, analyzing one's self and others, and an introspective disposition. A low score indicates a lack of introspectiveness and an extrovertive orientation of the thinking process.

No-3. *D--Depression*. A high score indicates a chronically depressed mood including feelings of unworthiness and guilt. A low score indicates freedom from depression and a cheerful, optimistic disposition.

No- 4. *C--Cycloid Disposition*. A high score indicates the presence of cycloid tendencies as shown in strong emotional reactions, fluctuations in mood, and a disposition toward flightiness and instability. A low score indicates stable emotional reactions and moods and freedom from cycloid tendencies.

No- 5. *R--Rhathymia*. A high raw score indicates a happy-go-lucky or carefree disposition, liveliness, and impulsiveness. A low score indicates an inhibited disposition and an over-control of the impulses.

LOADINGS ON ORTHOGONAL FACTORS

1. Cycloid Emotionality and Depression
2. Impulsiveness or Freedom from Shyness

No.	Identifications: Variable	Cd? 1	?[1] -2	h^2
No- 1.	Q:Shyness	39	-75	71
No- 2.	Q:Thinking	75	--	56
No- 3.	Q:Depression	96	--	98
No- 4.	Q:Cycloid	98	--	96
No- 5.	Q:Rhathymia	--	-75	57

[1] Evidently a combination of *So* and *Rh*.

ANALYSIS Ri

Richards, T. W. Factors in the personality of nursery school children. *J. exp. Educ.*, 1940, *9*, 152-153.

This study used the correlation data presented in Ball, R. S., and Roberts, K. E. A study of personality in young children by means of a series of rating scales. *J. Genetic Psychol.*, 1938, *52*, 79-149. The scores were the average ratings of 2 trained teachers on the Merrill-Palmer Personality Rating Scales. These were scales constructed after the fashion of the Thurstone Attitude Scales (see *Analysis Ch*). The intercorrelations where based on 66 to 95 nursery school children whose ages ranged from 48 to 59 months.

LOADINGS ON ORTHOGONAL FACTORS

I. Conformity II. Self-sufficiency III. Likeableness (or halo)

No.	Identifications: Variable	A? I	Ss II	So? III	h^2
Ri- 1.	R:Compliance with routine	88	--	27	79
Ri- 2.	R:Respect to authority	86	--	38	82
Ri- 3.	R:Respect property rights	67	50	34	01
Ri- 4.	R:Tendency to face reality	52	--	60	61
Ri- 5.	R:Free from adult affect	36	52	--	36
Ri- 6.	R:Sociability	--	27	86	69
Ri- 7.	R:Physical attractiveness	--	--	58	36
Ri- 8.	R:Attractiveness of person.	--	--	92	80
Ri- 9.	R:Ascendance	--	42	--	19

ANALYSIS RTA

Reyburn, H. A., and Taylor, J. G. Some factors of personality. A further analysis of some of Webb's data. *Brit. J. Psychol.*, 1939, *30*, 151-165.

The subjects were the group of men used by Webb: 194 men students (average age, 21) at a teacher-training college, during the last 6 months of their second year. (Webb, E. Character and intelligence. *Brit. J. Psychol. Monogr. Suppl.* No. 3, 1915.) The variables were based on ratings on personality traits made by fellow-student prefects or monitors. In groups of 19 or 20 two "judges" rated each subject on each trait making sure their judgments were absolutely independent. Ratings followed 3 months of observation and the writing of a complete personality sketch of each subject; they were made on a 7-point scale, +3 to -3. Webb used 39 traits (6 for Emotions, 6 for Self Qualities, 13 for Sociality, 7 for Activity, and 9 for Intellect) of which 19 are used in this study. When the reliability of the ratings--correlation between the 2 judges--for any group of 19 or 20 students fell below about .31 uncorrected, these ratings were entirely rejected. In this way 63 out of 445 pairs of ratings were rejected. (Evidently a slightly different group of subjects was thus retained for each co-efficient in the correlation matrix.)

RTA- 1. General tendency to be cheerful vs. being depressed and low-spirited.

RTA- 2. Tendency to quick oscillation between cheerfulness and depression vs. permanence of mood.

RTA- 3. Occasional liability to extreme depression.

RTA- 4. Readiness to become angry.

RTA- 5. Readiness to recover from anger.

RTA- 6. Occasional liability to extreme anger.

RTA- 7. Degree of sense of humor.

RTA- 8. Eagerness for admiration.

RTA- 9. Fondness for large social gatherings.

RTA-10. Impulsive kindness (to be distinguished from *RTA-11*).

RTA-11. Tendency to do kindnesses on principle.

RTA-12. Degree of corporate spirit (in whatever body interest is taken, e.g., college, school, country, native place, etc.).

RTA-13. Trustworthiness, keeping his word or engagement, performing his believed duty.

RTA-14. Conscientiousness, keenness of interest in the goodness and wickedness of actions.

RTA-15. Readiness to accept the sentiments of his associates.

RTA-16. Degree of 'tact' in getting on with people.

RTA-17. Degree of bodily activity in pursuit of pleasure, games, etc.

RTA-18. Tendency not to abandon tasks in the face of obstacles.

RTA-19. Tendency not to abandon tasks from mere changeability.

LOADINGS ON ORTHOGONAL FACTORS

I. Light-heartedness vs. serious mindedness. Cattell's Surgency-Desurgency.

II. Perseverance. More weight to steadiness and continuity than Webb's 'w' has.

III. Charity.

IV. Social sensitiveness (not sociability)

	Identifications:	?[1]	Pe	Ei?	A		
No.	Variable	I	II	-III	IV	h^2	R[2]
RTA- 1.	R:Cheerful	72	40	--	--	68	62
RTA- 2.	R:Fluctuating mood	--	-71	--	--	50	48
RTA- 3.	R:Occasional depression	-38	-57	--	--	47	46
RTA- 4.	R:Ready to become angry	--	47	82	--	92	55
RTA- 5.	R:Ready to drop anger	26	40	-50	--	53	55
RTA- 6.	R:Occasional extreme anger	--	42	65	--	62	49
RTA- 7.	R:Sense of humor	79	--	--	--	67	56
RTA- 8.	R:Eager for admiration	29	-33	57	--	53	56
RTA- 9.	R:Fond of gatherings	80	--	31	--	81	51
RTA-10.	R:Impulsive kindness	35	--	--	46	39	49
RTA-11.	R:Kindness on principle	--	49	-47	59	81	56
RTA-12.	R:Corporate spirit	46	--	--	66	66	57
RTA-13.	R:Trustworthiness	-26	60	-31	51	79	53
RTA-14.	R:Conscientiousness	-38	53	-35	50	79	59
RTA-15.	R:Accepts sentiments	--	--	-50	--	30	46
RTA-16.	R:Tact	23	--	-51	26	46	52
RTA-17.	R:Activity for pleasure	43	--	29	29	35	59
RTA-18.	R:Sticks with obstacles	--	79	--	--	65	49
RTA-19.	R:Sticks, not changeable	--	71	--	--	57	52

---

[1] Possibly a combination of Gs, So, and Su.

[2] Average reliability over groups of 19 or 20 subjects for ratings retained after low reliability ratings were rejected.

ANALYSIS RTB

Reyburn, H. A., and Taylor, J. G. Factors in introversion and extraversion. Brit. J. Psychol., 1941, 31, 335-340.

The subjects were 115 undergraduate students in psychology. The traits used were selected from a list of Heidbreder's representing ones having highest diagnostic value. These were used to form a self-rating questionnaire using a 5-point scale. The scale and each trait in turn were described orally to the group of subjects.

RTB- 1. Makes friends easily.

RTB- 2. Is easily hurt by remarks or actions of others.

RTB- 3. Is not suspicious of the motives of others.

RTB- 4. Does not worry about possible misfortunes (signs reversed).

RTB- 5. Indulges in self pity when things go wrong.

RTB- 6. Keeps his head in excitement and moments of stress (signs reversed).

RTB- 7. Takes prominent part in social affairs and entertainments.

RTB- 8. Is outspoken, blunt, critical (signs reversed).

RTB- 9. Prefers working with others.

RTB-10. Is subject to changes of mood without apparent cause.

RTB-11. 'p', a perseveration test of 3 items taken from Cattell given to 76 of the subjects.

LOADINGS ON ORTHOGONAL FACTORS

I. Perseverance - emotional and conative stability
II. Serious-mindedness vs light-heartedness, or Cattell's desurgency
III. Sociability
IV. 'p' - a perseveration factor found by Cattell

No.	Identifications: Variable	Cd -I	E II	So III	Wi? -IV	h^2
RTB- 1.	Q:Makes friends	--	--	51	--	27
RTB- 2.	Q:Easily hurt	26	31	--	-29	27
RTB- 3.	Q:Not suspicious	-30	--	--	--	12
RTB- 4.	Q:Worries about misfortunes	30	35	--	--	26
RTB- 5.	Q:Indulges in self-pity	32	62	--	--	49
RTB- 6.	Q:Loses head in excitement	--	42	--	--	22
RTB- 7.	Q:In social affairs	--	-28	67	--	54
RTB- 8.	Q:Not outspoken or blunt	--	--	--	-37	17
RTB- 9.	Q:Works with others	-35	29	69	--	71
RTB-10.	Q:Subject to changes of mood	74	--	--	--	55
RTB-11.	T:Perseverates	--	--	--	-48	24

ANALYSIS RTC

Reyburn, H. A., and Taylor, J. G. Some factors of temperament: a re-examination. Psychometrika, 1943, 8, 91-104.

The data used for this study are given in the rotated factorial matrix of Analysis GuB. The rotation was continued, not toward a criterion of simple structure, but toward meaningfulness of the factors. The vectors were placed at the centroids of pairs or small groups of items which seemed logically related. Further rotation was then made so that the loadings on variables 20, 24, and 29 were such as would show the most clear correspondence on 4 factors with the loadings of these variables found in Analysis RTD. These 3 variables were the only ones common to the 2 studies.

LOADINGS ON ORTHOGONAL FACTORS

I. Surgency
II. Persistence
III. Sociability (opp: Shyness)
IV. Alertness (triplet)
V. Flexibility (what fluency is with regard to speech)
VI. Liking for Thinking
VII. Interest in Action
VIII. Tension
IX. Not identified

No.	Identifications: Variable	Rh I	Mp -II	So III	Al IV	Ip -V	Iz VI	Ia VII	? VIII	? IX	h^2
RTC- 1.	Q:Ordinarily carefree	80	--	--	--	-26	-25	--	--	--	80
RTC- 2.	Q:Hard to start talking	--	--	-66	--	--	--	--	--	--	52
RTC- 3.	Q:Prefers to read	--	--	-29	--	--	--	-33	--	--	27
RTC- 4.	Q:Hesitates to lend	--	--	--	--	--	--	--	--	26	13
RTC- 5.	Q:Considerate	--	--	--	--	--	34	--	--	--	25
RTC- 6.	Q:Unconcerned about thoughts	35	--	--	-28	--	--	--	29	--	35
RTC- 7.	Q:Analyzes motives	--	--	--	--	38	46	--	--	--	42
RTC- 8.	Q:Practical	--	--	25	--	--	--	35	--	--	27
RTC- 9.	Q:Keeps in touch	--	--	49	63	--	--	--	--	--	70
RTC-10.	Q:Worries	-34	38	-26	--	--	--	--	-26	--	47
RTC-11.	Q:Has blues	--	34	-45	--	--	--	--	--	26	55
RTC-12.	Q:Keeps in background	--	--	-68	--	--	--	--	--	--	56
RTC-13.	Q:Athletics over intellectual	--	--	--	--	--	--	40	--	--	36
RTC-14.	Q:Impulsive	33	40	--	--	-29	--	--	--	--	46
RTC-15.	Q:Enjoys meeting	--	--	66	--	--	--	--	--	--	50
RTC-16.	Q:Often meditative	--	--	-26	--	49	41	--	--	--	60
RTC-17.	Q:Over-conscientious.	-36	--	--	--	--	--	--	28	--	35
RTC-18.	Q:Craves excitement	37	28	--	--	--	--	--	--	--	33
RTC-19.	Q:Ponders past	--	37	-39	--	--	34	--	--	--	45
RTC-20.	Q:Stops and thinks	-30	-46	--	--	42	--	--	-34	--	65
RTC-21.	Q:Less attentive	--	--	-55	-57	--	--	--	--	--	69
RTC-22.	Q:Serious discussions	--	--	--	--	40	--	--	--	--	27
RTC-23.	Q:Solves puzzles	--	-29	--	--	--	31	--	--	27	44
RTC-24.	Q:Happy-go-lucky	81	--	--	--	--	--	--	--	--	76
RTC-25.	Q:Likes problems	--	-43	--	--	--	60	--	--	--	60
RTC-26.	Q:Introspective	--	--	--	--	50	50	--	--	--	57
RTC-27.	Q:Unconcerned about future	37	--	--	--	--	--	--	--	--	22
RTC-28.	Q:Absorbed in athletics	--	--	--	--	--	--	44	--	--	32
RTC-29.	Q:Relaxes easily	27	-29	--	--	--	--	--	-32	--	42
RTC-30.	Q:Alert	--	--	--	55	--	--	--	--	--	38

ANALYSIS RTD

Reyburn, H. A., and Taylor, J. G. Some factors of temperament: a re-examination. Psychometrika, 1943, 8, 91-104.

The data used for this study are the intercorrelations obtained in Analysis GuC. Guilford's rotated factorial matrix was not used here as in Analysis RTC, because arithmetic errors were found in Guilford's computations. The rotation was carried out, not toward a criterion of simple structure, but toward meaningfulness of the factors. The vectors were placed at the centroids of pairs or small groups of items which seemed logically related. Further rotation was then made so that the loadings on variables 8, 15, and 21 were such as would show the most clear correspondence on 4 factors with the loadings of these variables found in Analysis RTC. These 3 variables were the only ones common to the 2 studies.

LOADINGS ON ORTHOGONAL FACTORS

I. Surgency
II. Persistence
III. Nervousness
IV. Flexibility (what fluency is with regard to speech)
V. Tension
VI. Inhibition

No.	Identifications: Variable	Rh I	Pe II	Ne III	Su IV	E? V	? VI	h^2
RTD- 1.	Q:Perspires	--	--	--	--	--	-25	21
RTD- 2.	Q:Changes posture	--	-42	--	--	--	-36	40
RTD- 3.	Q:Likes changing work	--	-73	--	--	--	--	66
RTD- 4.	Q:Easily distracted	-38	--	28	--	31	--	37
RTD- 5.	Q:Slow movement	--	25	--	-62	--	--	47
RTD- 6.	Q:Expresses emotions	--	--	26	--	--	--	16
RTD- 7.	Q:Easily startled	--	--	41	--	28	--	32
RTD- 8.	Q:Stops and thinks	-32	--	--	-34	--	--	27
RTD- 9.	Q:Nervous habits	--	-27	35	--	--	--	23
RTD-10.	J:Annoyed by nails	--	--	38	--	--	--	20
RTD-11.	Q:Eats rapidly	--	--	--	38	--	--	26
RTD-12.	Q:Rushes	--	--	--	52	--	28	43
RTD-13.	Q:Likes changing tasks	--	-72	--	--	--	--	64
RTD-14.	Q:Doodles	--	-28	36	--	--	--	23
RTD-15.	Q:Happy-go-lucky	66	--	--	--	--	--	46
RTD-16.	Q:Insomnia	--	-36	--	--	--	25	33
RTD-17.	Q:Hurries	-28	-31	--	25	--	--	38
RTD-18.	Q:Quick in actions	--	--	--	80	--	--	70
RTD-19.	Q:Uses up energy	--	--	--	--	38	--	21
RTD-20.	Q:Works fast	--	--	--	56	--	--	44
RTD-21.	Q:Relaxes easily	--	32	--	--	-45	-28	43
RTD-22.	Q:Talkative	40	--	--	31	--	--	31
RTD-23.	Q:Dislikes interruptions	-32	--	--	--	--	--	16

ANALYSIS SaB

Saunders, D. R. A further investigation of the relation between questionnaire and behavior rating personality factors. Unpublished.

This analysis used as subjects the same data obtained from a group of undergraduates at the University of Illinois that was used in *Analyses CaE*, *CaB*, and *CaC*. A total of 368 were complete on the 116 variables of this study. These variables include the 80 self-questionnaire variables of *Analysis CaE*, the 35 behavior-rating variables of *Analysis CaB*, and *Age*. The short descriptions are given in the table of loadings. The *CaB* and *SaB* variable numbers are the same, 1-80. Variables 81-115 are the same as the 35 *CaE* variables. For variables 81-115 the corresponding *CaE* variable may be found by subtracting 80 from the *SaB* number. The analysis used the multiple-group centroid method with 1.00 in the diagonals. The variables constituting the groups were selected from the questionnaire variables only. Rotation was to simple structure with the emphasis on the structure within the questionnaire variables.

LOADINGS ON ORTHOGONAL FACTORS

(Loadings as low as .15 are included for Variables 81-116, since the method of analysis and rotation caused these to be spuriously low.)

1. A_1
2. Q_4 from 16 P.F. Test*
3. I
4. H
5. G
6. E
7.
8. K
9. L
10. M
11. Q_2 from 16 P.F. Test*
12. C_1 subfactor of C
13. D
14. N
15.
16. C_2, subfactor of C
17. J
18. Q_1 from 16 P.F. Test*
19. C_3, subfactor of C
20. O
21. F
22. Q_3 from 16 P.F. Test*

---

* Cattell, R. B., Saunders, D. R., and Stice, G. The 16 P.F. Test. Inst. for Personality and Ability Testing, 1608 Coronado Drive, Champaign, Ill. 1949.

SaB

No.	Identifications: Variables	?[1] -1	E 2	Se 3	So 4	Pe -5	Do 6	Ir 7	Ip -8	Sc -9	Cv -10	Ss 11	Ne -12	? 13	Sf 14	? 15	Au -16	Cu? 17	Re 18	? 19	?[2] 20	Su -21	? 22
SaB- 1.	Q:Shyness	--	--	--	-70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	33	--	--	--
SaB- 2.	Q:Slow making friends	--	--	-25	-62	--	-39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB- 3.	Q:One track mind	--	--	--	-54	--	--	--	--	--	--	--	--	--	--	44	--	--	--	25	--	--	--
SaB- 4.	Q:Easily hurt	--	40	--	--	--	--	--	--	-29	--	--	--	--	--	--	--	--	--	--	41	--	--
SaB- 5.	Q:Easily rattled	--	44	--	--	--	--	--	--	-25	--	--	50	--	--	--	--	--	--	--	--	--	--
SaB- 6.	Q:Often miserable	--	--	--	--	--	--	--	--	-45	--	--	--	--	--	--	33	--	--	--	45	--	--
SaB- 7.	Q:Often worried	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	--	--	--	43	--	--
SaB- 8.	Q:Lonely with people	--	--	--	--	--	--	--	36	--	--	--	--	--	--	--	26	--	--	26	60	--	--
SaB- 9.	Q:Powerful moods	--	--	--	-27	--	--	--	--	-41	--	--	--	--	--	--	--	--	--	--	45	--	--
SaB-10.	Q:Not adjusted	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	45	--	--
SaB-11.	Q:No day dreams	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-70	--	--	--	--	--	--
SaB-12.	Q:Stray thoughts	--	--	--	--	--	--	--	--	-52	--	--	--	-26	--	--	32	--	--	--	--	--	--
SaB-13.	Q:Poor memory	--	--	--	--	--	--	--	--	-63	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-14.	Q:Not self-confident	--	--	--	-30	--	--	--	--	-58	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-15.	Q:Complains to waiter	-41	--	--	--	--	52	--	--	--	--	--	--	--	--	--	--	--	--	-45	--	--	--
SaB-16.	Q:Argues and bluffs	--	--	--	28	--	62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26
SaB-17.	Q:Easy to address	--	--	--	60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-18.	Q:Becomes absorbed	--	--	--	--	--	--	--	--	--	--	66	--	--	--	--	--	--	--	--	--	--	--
SaB-19.	Q:Dislikes parties	--	--	--	--	--	--	--	--	--	--	--	--	--	-55	--	--	--	--	--	--	--	29
SaB-20.	Q:Travels alone	--	--	--	--	--	--	--	--	--	--	64	--	--	--	--	--	--	--	--	--	--	--
SaB-21.	Q:Plans alone	--	--	--	--	--	--	--	--	--	--	60	--	--	--	--	--	--	--	--	--	--	33
SaB-22.	Q:Perseveres	--	--	--	--	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-23.	Q:Emotion out of control	--	--	--	--	--	--	--	--	--	--	--	47	--	--	--	--	--	--	--	41	--	--
SaB-24.	Q:Correct manners	--	--	--	--	--	--	--	--	--	--	--	--	--	72	--	--	--	--	--	--	--	--
SaB-25.	Q:Not considerate	--	--	--	29	--	--	--	--	--	--	--	--	-26	-35	--	--	--	--	--	--	--	--
SaB-26.	Q:Carefree	--	--	--	--	-60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26	--
SaB-27.	Q:Dislikes excitement	--	--	--	--	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-34	--
SaB-28.	Q:Dislikes variety	--	--	--	--	64	--	--	--	--	--	--	--	--	--	--	--	--	-31	--	--	--	--
SaB-29.	Q:Talkative	--	44	--	40	--	39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	31	--
SaB-30.	Q:Easily startled	--	--	--	--	--	--	--	--	--	--	--	52	--	--	--	37	--	--	--	--	--	--
SaB-31.	Q:Insomnia	--	--	--	--	--	--	--	46	--	--	42	--	--	--	--	--	--	--	--	32	--	--
SaB-32.	Q:Uses up energy	--	49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-33.	Q:Cynical	45	--	--	--	--	--	--	--	--	--	--	--	--	--	62	--	--	--	--	--	--	--
SaB-34.	Q:Moves slowly	--	--	--	--	--	--	--	--	--	--	--	-30	--	--	--	--	--	--	--	--	-69	--
SaB-35.	Q:Dislikes analyzing	--	--	--	--	--	-52	--	--	37	--	--	--	--	--	--	-29	--	--	--	--	--	--
SaB-36.	Q:Dislikes discussions	-28	--	--	--	--	--	--	-88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-37.	Q:Likes athletics	--	--	--	--	--	--	--	-32	--	--	--	--	--	--	32	--	-61	--	--	--	--	-30
SaB-38.	Q:Likes service	--	--	--	--	--	--	--	--	--	--	-59	--	--	36	--	--	--	--	--	--	--	--
SaB-39.	Q:Absent-minded	--	--	--	-59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-40.	Q:Likes theory	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	42	47	--	--	--		--
SaB-41.	Q:Anxiety	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	61	--	--	--	--		
SaB-42.	Q:Sleep walker	--	42	--	--	--	--	--	--	--	--	--	--	--	--	--	35	--	--	--	--		
SaB-43.	Q:Trivial Compulsions	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	63	--		
SaB-44.	Q:Cautious	31	--	--	-25	--	--	--	--	--	--	--	--	--	--	--	--	--	42	--	--	--	--
SaB-45.	Q:Softhearted	--	--	58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-46.	Q:Found fault with	--	--	--	--	--	--	--	--	-45	--	--	--	--	--	--	--	--	--	59	--	--	--
SaB-47.	I:Artist vs. YMCA	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-48.	I:Plato vs. Caesar	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28	--	--	--	--	63
SaB-49.	I:Physics vs. government	--	--	--	--	--	-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-45	--
SaB-50.	I:Truth vs. practice	--	--	--	--	--	--	--	--	--	--	--	-48	--	--	--	--	--	--	-44	--	--	--
SaB-51.	I:Personnel vs. Manager	--	--	56	--	--	--	--	--	--	--	--	--	--	--	-53	--	--	--	--	--	--	--
SaB-52.	I:Chemist vs. banker	61	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-53.	I:Market vs. religion	--	--	--	--	--	--	-44	--	--	--	-27	--	-44	--	--	--	--	--	--	--	--	--
SaB-54.	I:Worship vs. charity	--	--	--	--	--	--	62	--	--	--	--	-50	--	--	--	--	--	--	--	--	--	--
SaB-55.	I:Journalist vs. teacher	--	--	-56	--	-34	--	--	-26	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-56.	I:Lawyer vs. aviator	--	--	--	--	--	--	--	55	--	-43	--	--	--	41	--	--	--	--	--	--	--	--
SaB-57.	I:Vocation vs. sports	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	59	--	--	--	--	--
SaB-58.	I:Artist vs. C.P.A.	53	--	--	--	--	--	--	--	--	--	--	--	25	--	--	--	--	--	--	--	--	--
SaB-59.	I:Spiritual spouse	--	--	--	--	--	--	52	47	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-60.	I:Religion vs. govt.	--	--	--	--	--	--	56	--	--	--	--	--	--	--	--	--	--	34	--	--	--	--
SaB-61.	I:Art vs. social	--	--	--	--	--	--	--	--	--	--	25	--	--	--	--	--	39	--	--	--	--	--
SaB-62.	I:Give to church	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	76	--	--	--	--
SaB-63.	I:Thinking vs. practical	--	--	--	--	--	--	--	53	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-64.	J:Divorce vs. Sunday	--	-33	--	--	--	27	--	--	--	--	--	--	--	--	--	--	--	-44	--	--	--	--
SaB-65.	J:Cautious vs. progressive	--	26	--	--	--	-56	--	--	--	35	--	--	--	--	--	--	--	--	--	--	--	--
SaB-66.	J:Evolution vs. God	--	-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-47	--	--	--	--
SaB-67.	J:Soft vs. practical	--	--	--	--	--	--	--	--	--	--	--	--	47	--	--	--	--	--	--	--	--	--
SaB-68.	J:Sentiment vs. science	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-65
SaB-69.	J:State vs. free sex	--	--	54	--	--	--	--	--	--	50	--	--	--	--	--	--	--	--	--	--	--	--
SaB-70.	J:Society vs. self	-39	--	--	--	--	--	--	--	--	35	--	--	--	--	28	--	--	--	--	--	--	--
SaB-71.	J:War vs. gradual	--	--	-47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-72.	J:Friends vs. family	--	--	--	--	--	--	--	--	--	-53	--	--	--	--	--	--	--	--	--	--	--	--
SaB-73.	J:Race unimportant	--	--	--	--	--	--	--	--	--	-	--	--	--	--	-63	--	--	--	--	--	--	--
SaB-74.	I:Likes poetry	--	--	43	--	--	--	--	45	--	--	--	--	--	--	-31	--	--	--	--	--	--	--
SaB-75.	Q:Coffee keeps awake	--	--	--	--	--	--	--	28	--	--	--	--	73	--	--	--	--	--	--	--	--	--
SaB-76.	J:Annoyed by looks	--	--	--	--	--	--	--	-27	--	-37	--	--	38	--	--	--	--	-36	--	--	--	--
SaB-77.	J:Not annoyed by manners	--	--	--	--	--	--	--	--	--	-58	--	--	--	-31	--	--	--	--	--	--	--	--
SaB-78.	J:Not annoyed by bragging	--	--	--	--	--	--	--	-30	--	--	--	--	27	41	--	--	--	--	--	--	--	--
SaB-79.	J:Annoyed by acts	--	--	--	--	--	--	-63	--	--	-26	--	--	--	--	--	--	--	36	--	--	--	--
SaB-80.	C:Male sex	--	--	-37	--	--	--	--	--	--	--	--	-25	--	--	57	--	--	--	--	--	--	--

SaB

No.	Identifications: Variable	?[1] -1	E 2	Se 3	So 4	Pe -5	Do 6	Ir 7	Ip -8	Sc -9	Cv -10	Ss 11	Ne -12	? 13	Sf 14	? 15	Au -16	Cu? 17	Re 18	? 19	?[2] 20	Su -21	? 22
SaB- 81.	R:Cooperates	-21	--	--	--	15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB- 82.	R:Stable	--	-29	--	--	33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB- 83.	R:Attention-getting	--	24	--	21	-25	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	17	--
SaB- 84.	R:Assertive	--	--	-18	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	26	--
SaB- 85.	R:Depressed	--	--	--	-24	29	--	--	16	--	--	--	--	--	--	--	--	--	--	-15	--	-16	--
SaB- 86.	R:Frivolous	--	22	--	--	-44	--	--	--	--	--	--	--	-15	--	--	--	--	--	--	--	--	--
SaB- 87.	R:Attentive	-25	--	--	16	--	--	--	--	--	--	-16	--	--	--	--	--	--	--	--	-15	--	--
SaB- 88.	R:Easily upset	--	23	28	-23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-25	--	--
SaB- 89.	R:Languid	--	--	--	-38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-29	--
SaB- 90.	R:Boorish	--	--	--	--	-34	--	--	-23	--	--	--	--	--	--	17	--	-21	--	--	--	--	-27
SaB- 91.	R:Suspicious	--	27	--	--	--	--	--	--	-26	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB- 92.	R:Good-natured	--	--	19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-19
SaB- 93.	R:Calm	--	-26	--	-24	23	--	--	--	16	--	--	--	--	--	--	--	--	--	--	--	-15	--
SaB- 94.	R:Hypochondriacal	--	36	--	--	--	--	--	--	--	--	-18	--	--	--	--	--	--	--	--	--	--	--
SaB- 95.	R:Self-effacing	--	-15	15	-32	--	-16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-16	-15
SaB- 96.	R:Silent	--	--	--	-43	28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-24	--
SaB- 97.	R:Persevering	--	--	--	--	54	--	--	--	--	--	19	--	--	--	-15	--	--	--	--	--	--	--
SaB- 98.	R:Cautious	--	--	--	-36	40	--	--	--	--	--	--	--	--	15	--	--	--	15	--	--	-18	--
SaB- 99.	R:Hard	18	--	-33	--	--	--	--	--	--	--	15	--	--	--	--	--	--	--	--	--	--	15
SaB-100.	R:Orderly	--	--	--	--	45	-18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-101.	R:Polished	-19	--	--	16	30	--	--	--	--	--	--	--	--	--	-15	--	--	--	--	--	--	--
SaB-102.	R:Jealous	--	24	--	22	--	--	--	--	-18	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-103.	R:Rigid	--	--	--	--	27	--	--	--	--	--	--	--	--	--	--	--	--	15	--	--	--	16
SaB-104.	R:Demanding	--	26	--	16	-15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-105.	R:Unconventional	18	--	--	--	-27	20	--	--	--	--	22	--	--	--	--	--	--	--	--	--	--	--
SaB-106.	R:Placid	--	-28	-15	--	--	--	--	--	18	--	26	--	-18	--	--	--	--	--	--	--	--	--
SaB-107.	R:Conscientious	--	--	--	-23	37	-18	--	--	--	--	--	--	--	--	-17	--	--	--	--	--	--	--
SaB-108.	R:Composed	--	--	--	43	--	16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	--
SaB-109.	R:Imaginative	--	23	22	--	--	21	--	--	--	--	--	17	--	--	--	--	--	--	--	--	--	--
SaB-110.	R:Neurotic fatigue	--	46	--	--	--	--	--	16	-15	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-111.	R:Esthetic	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SaB-112.	R:Sex interest	--	--	--	16	-25	25	--	--	--	--	-17	--	--	--	--	--	--	--	--	--	--	-16
SaB-113.	R:Frank	--	18	--	23	-16	16	--	-15	--	--	--	--	--	--	--	--	--	--	--	--	25	--
SaB-114.	R:Gregarious	--	16	--	32	-31	--	--	--	--	--	-25	--	--	--	--	--	--	--	--	--	19	--
SaB-115.	R:Dependent	--	--	--	-20	-25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-26
SaB-116.	Age	--	--	-19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

---

[1] Probably a combination of Is and -Gs and possibly Iw.

[2] Probably a combination of Cd and Lo.

ANALYSIS SB

Stewart, N., and Bergmann, C. Cognitive and conative factors in self-ratings and ratings by others. Paper read at convention of American Educational Research Association, 1951.

Separate analyses were made of self-ratings with school achievement, "buddy"-ratings and school achievement, and of all 3 together. Only the results of the large analysis are included here, since the smaller ones were in good agreement with it.

Students in seven sociology and English classes at Queens College, mainly sophomores and juniors, were asked to name the 4 individuals in each class who were *most*, and the 4 who were *least* ambitious, efficient, industrious, intellectual, quick-thinking, dominant, aggressive, sociable, and emotional. They were instructed to name themselves wherever they deemed it appropriate. These nominations were quantified to provide a measure of each individual's standing on each trait, as seen by his classmates, and a measure of his standing on each trait as seen by himself. Other scores obtained were:

SB-19. Authoritarianism. This was a questionnaire containing 10 items from the Berkeley authoritarianism scale, which appears to yield a reasonably valid measure of anti-democratic trends at the personality level. Concerning this instrument Adorno, et al, writes, "Authoritarian personality tendencies, manifested on the surface in a high level of ethnocentrism are evidenced at a deeper level by rigid adherence to conventional values; uncritical acceptance of authoritative power figures and identification of self with such figures; cynicism, suspiciousness, rejection of tender-mindedness; disposition to think in stereotyped categories.

SB-20. Course Grade. The student's grade in the classes in which the ratings had been made.

SB-21. High School Average.

SB-22. College Average. Grade-point average through sophomore year.

SB-23. Percentile score on the American Council on Education Psychological Examination.

SB

LOADINGS ON ORTHOGONAL FACTORS

I. Cognition	IV. Deluded Self-Regard: I
II. Socialized Aggression	V. Deluded Self-Regard: II
III. Personal Effectiveness	

	Identifications:	G	Do	?[1]	?[2]	?[3]	
No.	Variable	I	II	III	IV	V	h^2
SB- 1.	R:Ambitious - Buddy rating	41	--	66	--	--	66
SB- 2.	Q:Ambitious - Self rating	32	--	43	48	--	52
SB- 3.	R:Efficient - Buddy rating	37	--	59	--	--	53
SB- 4.	Q:Efficient - Self rating	29	--	--	46	26	39
SB- 5.	R:Industrious - Buddy rating	43	--	70	--	--	69
SB- 6.	Q:Industrious - Self rating	--	-30	--	38	--	35
SB- 7.	R:Intellectual - Buddy rating	47	--	70	--	--	75
SB- 8.	Q:Intellectual - Self rating	41	--	--	51	--	49
SB- 9.	R:Quick-Thinking - Buddy rating	40	57	53	--	--	81
SB-10.	Q:Quick-Thinking - Self rating	32	--	--	56	--	49
SB-11.	R:Dominant - Buddy rating	--	82	26	--	--	79
SB-12.	Q:Dominant - Self rating	--	52	--	27	--	44
SB-13.	R:Aggressive - Buddy rating	--	66	--	--	--	55
SB-14.	Q:Aggressive - Self rating	--	48	--	--	34	44
SB-15.	R:Sociable - Buddy rating	--	52	--	--	--	33
SB-16.	Q:Sociable - Self rating	--	36	--	--	34	32
SB-17.	R:Emotional - Buddy rating	--	26	--	38	--	26
SB-18.	Q:Emotional - Self rating	--	32	--	--	--	17
SB-19.	Q:Authoritarianism	-32	--	--	42	36	44
SB-20.	T:Course Grade	56	--	--	--	-26	44
SB-21.	T:H. S. Average	58	--	--	--	--	43
SB-22.	T:College Average	62	--	--	--	--	46
SB-23.	T:A.C.E. Score	48	--	--	--	-28	32

[1] Buddy-rating halo.

[2] Self-rating halo on cognition (Deluded self-regard).

[3] Self-rating halo on personality (Deluded self-regard).

ANALYSIS Sg

Strong, E. K. Vocational Interests of Men and Women. 1943, Stanford University Press. Pp. xxix plus 746.

The subjects were 285 Stanford University senior men. This book discusses several analyses made from these and related data, all of which are said to have yielded very similar results. Reported in the "fifth" analysis for men. Strong's revised blank for men, published in 1938, was used for this analysis. The revised blank for women was published in 1946. These, however, will be considered sufficiently close to the older scales that they will be treated in this survey as parallel variables. In some cases it is not clear whether the revised or older form was used.

The revised blank for men provides lists of 100 "occupations," 36 "school subjects," 49 "amusements," 48 "activities," and 47 "peculiarities of people" about which the subject is to circle L, I, or D, indicating "Like," "Indifferent," or "Dislike"; 40 items requiring selection of most and least preferred activities; 40 items requiring comparison of preference for pairs of items; and 40 items involving self-ratings of "present abilities and characteristics." The revised blank for women has the same categories, but the items are different and the numbers in CaD category differs slightly. Both blanks have a total of 400 items. The responses are keyed to produce scores for some 38 vocations. The table of loadings gives the names of the scales. An analysis of women's occupations is reported in the book, but there was no rotation for that analysis.

Sg

LOADINGS ON ORTHOGONAL FACTORS

I. Science
II. "C.P A."
III. Things vs. People or Language
IV. Working with people for their presumed good
V. Not named

No.	Identifications: Variable	Is I	Ib? II	Il III	Iw IV	? V	h^2
Sg- 1.	I:Artist	90	--	34	--	--	97
Sg- 2.	I:Psychologist	77	33	--	38	--	87
Sg- 3.	I:Architect	92	--	--	--	--	85
Sg- 4.	I:Physician	91	--	--	--	--	86
Sg- 5.	I:Dentist	81	--	-33	--	--	79
Sg- 6.	I:Mathematician	74	32	--	--	44	91
Sg- 7.	I:Physicist	82	--	-39	--	28	97
Sg- 8.	I:Engineer	58	--	-60	-46	--	97
Sg- 9.	I:Chemist	75	26	-54	--	--	96
Sg-10.	I:Production manager	--	--	-68	-55	26	87
Sg-11.	I:Farmer	26	-40	-76	--	-34	93
Sg-12.	I:Carpenter	27	--	-88	--	--	91
Sg-13.	I:Printer	29	--	-74	32	--	73
Sg-14.	I:Mathematics-science teacher	--	--	-85	34	--	88
Sg-15.	I:Policeman	--	--	-83	--	--	81
Sg-16.	I:Forest service	--	--	--	--	--	--
Sg-17.	I:Y.M.C.A. physical director	--	--	-37	71	37	82
Sg-18.	I:Personnel manager	-48	38	--	32	48	71
Sg-19.	I:Y.M.C.A. secretary	-53	--	--	71	--	84
Sg-20.	I:Social science teacher	-58	--	--	76	--	94
Sg-21.	I:School superintendent	-32	35	29	73	--	84
Sg-22.	I:Minister	--	--	--	87	--	81
Sg-23.	I:Musician	45	--	--	72	--	73
Sg-24.	I:Certified public accountant	--	73	40	--	--	72
Sg-25.	I:Accountant	-65	43	-42	--	--	80
Sg-26.	I:Office man	-80	--	-33	--	--	79
Sg-27.	I:Purchasing agent	-60	--	--	-61	--	80
Sg-28.	I:Banker	-79	--	--	--	-26	73
Sg-29.	I:Sales manager	-66	--	46	-31	44	94
Sg-30.	I:Real estate salesman	-55	-28	61	-25	--	87
Sg-31.	I:Life insurance salesman	-53	--	68	--	38	91
Sg-32.	I:Advertising man	--	--	85	--	28	83
Sg-33.	I:Lawyer	--	27	82	--	--	79
Sg-34.	I:Author-journalist	59	--	72	--	--	89
Sg-35.	I:President	--	--	36	-75	--	74
Sg-36.	I:Occupational level	--	--	78	-39	--	79
Sg-37.	I:Masculinity-femininity	--	--	-74	-47	--	81

ANALYSIS St

Stott, L. H. An analytical study of self-reliance. J. Psychol., 1938, 5, 107-118.

The subjects were 650 high school sophomores of the Lincoln High School, Lincoln, Nebraska. A set of 30 brief descriptions of the behavior and feelings of young people in common everyday situations served as a basis for the preliminary form of the test. These statements were patterned after those used by Maller in his Character Sketches. Each statement was agreed upon by a group of competent judges as characterizing either the self-reliant or the non-self-reliant individual. For each of the 30 statements as nearly as possible an exact opposite was then made up making a total of 60 items (30 in positive, and 30 in negative form) for the experimental edition of the test. These 60 items were mixed at random. The instructions were for the subject to indicate whether or not he considered himself the same as, or different from the person described in the item, or as in some instances, whether he thought he would act the same or differently under the same circumstances. Two analyses were made: one for the positive items (St1) and one for the negative (St2). The items are presented below in the order in which they appeared in the test.

St1- 1. This person is seldom late for school or work on mornings when he must get up without being called.

St2- 2. When buying an article of clothing this person never likes to decide for himself which particular color or style to choose.

St1- 3. This person is self-reliant.

St2- 4. Is usually quite upset at examination time because he has put off studying until the last minute.

St1- 5. Usually gets himself out of a difficult situation without help.

St2- 6. Seldom goes ahead with other work besides what he has been told to do.

St1- 7. This person would prefer to arrange his own schedule for study, work and recreation.

St2- 8. Feels "lost" terribly bored when he finds he has "nothing to do" for the evening.

St2- 9. This person has difficulty making up his mind for himself.

St1-10. Usually faces his troubles alone without seeking help.

St2-11. Does not care to plan a trip, hike or party; waits to be invited to go along.

St2-12. If present when a child is injured in a playground accident this person would be unable to decide what should be done until others had taken charge of the situation.

St1-13. If a difficult task were assigned to the class this person would be one of the last to go for help.

St

St1-14. Is very conscientious in his work.

St2-15. When working on a committee this person is easily convinced that his idea is not good if someone else does not agree with him.

St1-16. Is always ready to take the consequences of whatever he does; never blames anyone else.

St2-17. Dislikes finding his way about in a strange place.

St1-18. Has no difficulty deciding on gifts to buy for others.

St1-19. Enjoys planning work for himself and others to do.

St2-20. Seldom has an idea for making money.

St2-21. Does not like to work out new ways of doing his everyday tasks.

St2-22. This person, if traveling, would prefer to be with someone who would be responsible for all necessary arrangements.

St2-23. This person's suggestions and ideas are seldom made use of in class meetings or committee meetings.

St2-24. Doesn't mind being a little late for an appointment.

St1-25. Seems to know what to do in an emergency.

St2-26. This person would rather not rely upon his own judgment in the use of his money.

St2-27. Does not like to solve complicated puzzles by himself.

St1-28. Always finds plenty of work to do during his spare time.

St1-29. Is usually asked to help plan special parties and programs at school.

St1-30. This person greatly enjoys occasional evenings which he must spend alone.

St2-31. Seldom faces his troubles alone without seeking help.

St1-32. Usually feels fairly confident at examination time because he has not put off his studying until the last minute.

St2-33. This person is usually late for school or work on mornings when he must get up without being called.

St1-34. Never feels "lost" or bored when he finds he has "nothing to do" for the evening.

St1-35. Greatly enjoys finding his way about in a strange place.

St

St1-36. Likes to work out new ways of doing his every day tasks.

St2-37. Seldom finds any work to do during his spare time.

St1-38. When buying an article of clothing this person much prefers to decide for himself which particular color or style to choose.

St1-39. Usually goes ahead with other work besides what he has been told to do.

St2-40. Has great difficulty deciding on gifts to buy for others.

St1-41. This person's suggestions and ideas are nearly always made use of in class meetings and committee meetings.

St2-42. Never enjoys the occasional evenings which he must spend alone.

St2-43. This person is not self-reliant.

St1-44. Has no difficulty making up his mind for himself.

St2-45. Seldom gets himself out of a difficult situation without help.

St2-46. Is not always ready to take the consequences of what he does; often blames someone else.

St2-47. Is not conscientious in his work.

St1-48. If present when a child is injured in a playground accident this person would be one of the first to decide what should be done and to take charge of the situation.

St2-49. Does not enjoy planning work for himself and others.

St1-50. This person would much rather rely upon his own judgment in the use of his money

St1-51. Greatly dislikes being a little late for an appointment.

St2-52. Is not often asked to help plan special parties and programs at school.

St2-53. This person would prefer to let his parents arrange for him his schedule of study, work and recreation.

St1-54. When working on a committee this person is not easily convinced that his idea is not good if someone else disagrees with him.

St2-55. If a difficult task were assigned to the class this person would be one of the first to go for help.

St1-56. Has lots of idea for making money.

St1-57. Likes to solve complicated puzzles by himself.

St

St2-58. This person never seems to know what to do in an emergency.

St1-59. Enjoys planning a trip, hike or party; seldom waits to be invited to go along.

St1-60. This person, if traveling, would prefer to make his own plans and arrangements.

LOADINGS ON ORTHOGONAL FACTORS

Positive Items

Ip. Independence of decision in personal matters
IIp. Efficiency in the use of time
IIIp. Social resourcefulness
IVp. ---
Vp. ---

No	Identifications: Variable	Ss Ip	Gs?[1] -IIp	?[2] IIIp	? IVp	Pe? -Vp	h^2
St1- 1.	Q:Seldom late	--	-44	--	--	--	23
St1- 3.	Q:Self-reliant	31	-37	--	30	--	37
St1- 5.	Q:Extricates self	51	--	--	--	--	33
St1- 7.	Q:Arranges own schedule	--	--	--	--	--	10
St1-10.	Q:Faces troubles alone	68	--	--	--	--	48
St1-13.	Q:Last to go for help	--	--	--	-27	--	12
St1-14.	Q:Conscientious	--	-37	27	--	--	30
St1-16.	Q:Never blames others	37	--	--	--	--	21
St1-18.	Q:Decides on gifts	--	--	--	--	-25	19
St1-19.	Q:Plans work	--	--	26	--	-42	28
St1-25.	Q:Acts in emergency	59	--	--	51	-25	69
St1-28.	Q:Works in spare time	--	-28	25	--	-26	27
St1-29.	Q:Asked to plan parties	--	--	72	26	--	63
St1-30.	Q:Enjoys evenings alone	--	-57	--	--	--	37
St1-32.	Q:Confident at exam. time	--	-42	--	--	--	23
St1-34.	Q:Never bored	--	-54	--	--	--	35
St1-35.	Q:Enjoys strange place	25	--	--	--	-51	36
St1-36.	Q:Does tasks new way	--	-35	--	--	-57	45
St1-38.	Q:Chooses own clothes	46	-35	--	-28	--	31
St1-39.	Q:Does extra work	--	-32	51	--	--	40
St1-41.	Q:Makes good suggestions	--	--	71	--	--	58
St1-44.	Q:Makes up own mind	61	--	--	--	--	40
St1-48.	Q:Takes charge	45	--	--	35	-33	43
St1-50.	Q:Use of money	28	--	--	-54	--	41
St1-51.	Q:Hates being late	--	-30	--	41	--	32
St1-54.	Q:Doesn't give in	--	--	--	--	--	08
St1-56.	Q:Ideas for making money	26	--	--	--	-41	25
St1-57.	Q:Solves puzzles	40	-38	--	--	-32	41
St1-59.	Q:Plans trips	--	--	--	--	-28	15
St1-60.	Q:Makes own plans	43	--	--	--	-27	30

---

[1] Includes some De.

[2] Social leadership.

St

LOADINGS ON ORTHOGONAL FACTORS

Negative Items

In. Independence of decision in personal matters
IIn. Efficiency in the use of time
IIIn. ---
IVn. Personal responsibility
Vn. ---

No.	Identifications: Variable	Ss In	Gs? -IIn	? IIIn	De IVn	? Vn	h^2
St2- 2.	Q:Chooses own clothes	35	--	--	--	--	17
St2- 4.	Q:Confident at exam time	--	--	--	38	--	24
St2- 6.	Q:Does extra work	31	-32	--	--	--	24
St2- 8.	Q:Never bored	--	-55	-27	--	--	40
St2- 9.	Q:Makes up own mind	35	--	--	--	44	39
St2-11.	Q:Plans trip	--	-25	--	--	62	48
St2-12.	Q:Takes charge	28	--	--	--	44	32
St2-15.	Q:Doesn't give in	--	--	--	--	39	25
St2-17.	Q:Enjoys strange place	30	--	--	--	--	14
St2-20.	Q:Ideas for making money	--	--	--	--	--	10
St2-21.	Q:Does tasks new way	25	-48	--	--	--	33
St2-22.	Q:Makes own plans	41	--	-51	--	29	53
St2-23.	Q:Makes good suggestions	30	-38	38	--	--	42
St2-24.	Q:Hates being late	--	--	--	65	--	53
St2-26.	Q:Use of money	39	--	--	--	--	25
St2-27.	Q:Solves puzzles	42	-34	-38	--	--	47
St2-31.	Q:Faces troubles alone	40	--	--	30	--	29
St2-33.	Q:Seldom late	--	-26	--	55	--	42
St2-37.	Q:Works in spare time	--	-68	--	--	--	52
St2-40.	Q:Decides on gifts	--	--	-25	--	--	13
St2-42.	Q:Enjoys evenings alone	--	-53	--	--	--	34
St2-43.	Q:Self-reliant	50	--	33	50	--	61
St2-45.	Q:Extricates self	61	--	--	--	--	40
St2-46.	Q:Never blames others	46	--	--	--	--	25
St2-47.	Q:Conscientious	--	-46	--	36	--	38
St2-49.	Q:Plans work	--	-49	--	--	38	39
St2-52.	Q:Asked to plan parties	--	-34	30	--	--	23
St2-53.	Q:Arranges own schedule	--	--	--	--	--	07
St2-55.	Q:Last to go for help	35	--	--	--	-29	23
St2-58.	Q:Acts in emergency	48	-30	--	--	31	46

ANALYSIS ThA

Thurstone, L. L. A multiple factor study of vocational interests. Personnel J., 1931, 10, 198-205.

This analysis was made from the intercorrelations among the interest scores of 18 professions supplied by E. K. Strong (see Analysis Sg for Strong VIB). Details concerning the original data are not given. The analysis was made by a grouping method so that rotation was not required.

LOADINGS ON ORTHOGONAL FACTORS

I. Interest in science
II. Interest in language
III. Interest in people
IV. Interest in business

	Identifications:	Is	Il	Iw	Ib	
No.	Variable	I	II	III	IV	h^2
ThA- 1.	I:Advertising	-48	66	--	--	76
ThA- 2.	I:Art	45	70	--	-31	82
ThA- 3.	I:Certified Public Accountant	--	32	--	56	42
ThA- 4.	I:Chemistry	98	--	--	--	103
ThA- 5.	I:Engineering	84	-36	--	--	91
ThA- 6.	I:Law	--	77	--	44	85
ThA- 7.	I:Ministry	--	51	62	-30	74
ThA- 8.	I:Psychology	77	47	--	-28	89
ThA- 9.	I:Teaching	36	--	68	--	66
ThA-10.	I:Life Insurance Salesman	-82	--	27	45	95
ThA-11.	I:Architecture	83	26	--	--	78
ThA-12.	I:Y.M.C.A. Secretary	--	--	90	-37	100
ThA-13.	I:Farming (agriculture student)	71	-54	--	--	83
ThA-14.	I:Purchasing Agent	--	-79	--	44	82
ThA-15.	I:Journalism	--	84	-28	25	87
ThA-16.	I:Personnel	-30	-26	66	--	63
ThA-17.	I:Real Estate Salesman	-76	--	--	58	92
ThA-18.	I:Physician	71	33	-26	--	69

ANALYSIS ThB

Thurstone, L. L. The dimensions of temperament: Analysis of Guilford's Thirteen Personality Scores. Psychometric Laboratory, Univ. of Chicago. No. 42. June, 1947 and *Psychometrika*, 1951, *16*, 11-20.

The data used in this analysis were intercorrelations in Lovell, C., A study of factor structure of thirteen personality variables. *Educ. psychol. Meas*. 1945, *5*, 335-350. For the list of variables see *Analysis Lo*. Since the scores on Guilford's questionnaires represent factor scores, Lovell was analyzing the second-order domain; this required the use of communalities in the diagonals. The present analysis, on the other hand, was designed to find out how many independent factors were really represented by Guilford's 13 scores; this required the use of the test reliabilities in the diagonals.

LOADINGS ON OBLIQUE FACTORS

R. Reflective
F. Friendly
S. Emotionally Stable
M. Masculine
L. Ascendant (social leadership)

A. Active
I. Impulsive
X_1. Self-confidence?
X_2. No interpretation

	Identifications[1]:	Ip?	A	Cd?	Mf?	Do?	?	Su?	Sc?	?		
No.	Variable	R	F	-S	M	L	A	I	X_1	X_2	h^2	R[3]
ThB- 1.	Q:Social Extraversion[2]	-29	--	-32	--	42	--	--	--	--	90	90
ThB- 2.	Q:Thinking Extraversion[2]	-76	--	-36	--	--	--	--	--	--	80	84
ThB- 3.	Q:Freedom from Depression[2]	-35	--	-50	--	--	--	--	--	--	93	94
ThB- 4.	Q:Emotional Stability[2]	-26	--	-50	--	--	--	--	--	--	94	88
ThB- 5.	Q:Rhathymia	-41	--	--	--	--	--	45	--	--	89	90
ThB- 6.	Q:General Activity	--	--	--	--	--	44	60	--	--	88	89
ThB- 7.	Q:Ascendance	--	--	--	--	55	--	--	30	--	90	88
ThB- 8.	Q:Masculinity	--	--	--	74	--	--	--	--	--	81	85
ThB- 9.	Q:Freedom from Inferiority[2]	--	--	--	--	--	--	--	35	--	84	91
ThB-10.	Q:Freedom from Nervousness[2]	--	--	-32	--	--	--	--	--	29	81	89
ThB-11.	Q:Objectivity[2]	--	31	--	--	--	--	--	34	--	82	83
ThB-12.	Q:Agreeableness[2]	--	66	--	--	--	--	--	--	--	76	80
ThB-13.	Q:Cooperativeness[2]	--	72	--	--	--	43	--	--	--	88	91

[1] Since each variable covers a factorial area, these factors all tend to be combinations.

[2] The signs of the loadings on these variables were changed in the article to let high scores be favorable as indicated by these names of the variables.

[3] These are the reliabilities published in the manuals.

ThB

INTERCORRELATIONS OF THE FACTORS

	R	F	S	M	L	A	I	X_1	X_2
R		-11	-23	15	07	11	-01	06	-02
F	-11		52	-03	01	-37	-15	56	-14
S	-23	52		05	04	-18	-10	66	-12
M	15	-03	05		03	32	-11	30	-09
L	07	01	04	03		-17	71	03	-19
A	11	-37	-18	32	-17		-26	-16	04
I	-01	-15	-10	-11	71	-26		-19	-22
X_1	06	56	66	30	03	-16	-19		-01
X_2	-02	-14	-12	-09	-19	04	-22	-01	

ANALYSIS To

Torr, D. V. A factor analysis of selected interest inventories. Presentation at Amer. Psychol. Assoc. Meetings, 1952, Washington, D C. Details on microfilm, Washington Univ., St. Louis.

The subjects were 595 white male United States Air Force airmen undergoing basic training at Lackland Air Force Base. Tetrachoric correlations were used.

To- 1. Masculinity-Femininity. The scale by this name of the Strong Vocational Interest Blank. See Analysis Sg.

To- 2 through To-11. Thurstone Interest Schedule. Each of 10 occupational fields, represented by 10 different occupational titles in that field, is compared twice with each of the other fields. In a 10 x 10 box chart the pairs of occupations are so arranged that the first items in any column represent the same field. Similarly, the second items in any row represent the same field. The score for a field is found, then, by counting checks in a row and a column. The subject can mark either, both, or neither items in a pair. The test takes about 10 minutes.

To-12 through To-29. Guilford-Shneidman-Zimmerman Interest Survey, Form A. This is made up of 360 items which have been grouped by the authors into 18 scales, each yielding a measure of hobby interest and vocational interest. The examinee has 3 alternatives from which to choose after reading an item: H, liking as a hobby; V, liking as a vocation; and D, disliking, disinterest or don't know. Both H and V may be chosen. These variables were the sum of the H and V responses for the scales named in the table of loadings.

To-30 through To-35. Lee Thorpe Occupational Interest Inventory. This provides measures on 6 interest fields of 3 types. The scores are obtained from 120 pairs of activities in forced-choice form. Each alternative is keyed for one field of interest. The sum of the responses on any key is converted to a centile rank through the use of norms provided by the authors. For this experiment the inventory was presented in free-choice form.

To-36 through To-41. Texas Occupational Interest Analyzer. This consists of pairings of vocational titles each of which is keyed for one of the 6 scales. The subject checks one or both as liked or both as disliked.

To-42 through To-48. Brainard Occupational Preference Inventory. This has 140 activities keyed for 7 scales. The items are responded to on a 5-point scale from 2 to -2.

To-49. Biographical Inventory after Sims. This is an Air Force adaptation of the Sims Score Card for Socio-Economic Status with 26 biographical items.

To

LOADINGS ON ORTHOGONAL FACTORS

I. Interest in mechanics
II. " " people
III. " " aesthetics
IV. " " nature
V. Inventory factor
VI. Interest in science
VII. Interest in business
VIII. Inventory factor
IX. No interpretation
X. " "
XI. " "
XII. " "

No.	Identifications: Variable	?[1] I	Iw?[2] II	Ie III	?[3] IV	?[4] V	Is VI	Ic VII	?[4] VIII	? IX	? X	? XI	? XII	h^2
STRONG														
To- 1.	I:Masculinity	51	-33	-32	--	--	--	--	--	--	--	28	--	69
THURSTONE														
To- 2.	I:Physical Science	62	--	--	--	--	48	--	--	--	--	--	--	75
To- 3.	I:Biological Science	--	37	--	--	--	58	--	--	--	--	--	--	58
To- 4.	I:Computational	--	--	--	--	58	--	56	--	--	--	--	--	77
To- 5.	I:Business	--	--	--	--	68	--	49	---	--	--	--	--	83
To- 6.	I:Executive	--	61	--	--	53	--	--	--	--	--	--	--	79
To- 7.	I:Persuasive	--	39	32	--	60	--	--	--	--	--	--	--	82
To- 8.	I:Linguistic	--	44	55	--	30	--	--	--	--	--	--	39	88
To- 9.	I:Humanitarian	--	65	--	--	35	--	--	--	--	--	--	--	74
To-10.	I:Artistic	--	--	65	--	28	--	--	--	--	--	--	--	62
To-11.	I:Musical	--	--	61	--	--	--	--	--	--	--	--	--	47
GUILFORD et al														
To-12.	I:Artistic Appreciative	--	--	72	--	--	--	--	42	--	--	--	--	82
To-13.	I:Artistic Expressive	--	--	86	--	--	--	--	34	--	--	--	--	94
To-14.	I:Linguistic Appreciative	--	36	52	--	--	26	--	38	--	--	--	25	73
To-15.	I:Linguistic Expressive	--	39	62	--	--	--	--	32	--	--	--	27	80
To-16.	I:Scientific Investigatory	--	--	--	--	--	80	--	--	--	--	--	--	94
To-17.	I:Scientific Theoretical	--	--	--	--	--	86	--	--	--	--	--	--	92
To-18.	I:Mechanical Manipulative	84	--	--	27	--	--	--	--	--	--	--	--	85
To-19.	I:Mechanical Designing	72	--	--	--	--	31	--	27	--	--	--	--	78
To-20.	I:Outdoor Natural	--	--	--	77	--	--	--	37	--	--	--	--	87
To-21.	I:Outdoor Athletic	--	26	--	--	--	--	--	41	--	--	--	--	40
To-22.	I:Bus.-Polit. Mercantile	--	34	26	--	--	--	55	55	--	--	--	--	87
To-23.	I:Bus.-Polit. Leadership	--	55	--	--	--	--	39	61	--	--	--	--	97
To-24.	I:Social Persuasive	--	55	--	--	--	--	40	58	--	--	--	--	94
To-25.	I:Social Gregarious	--	55	--	--	--	--	--	56	--	--	--	--	72
To-26.	I:Personal Service	--	64	--	--	--	--	28	46	--	--	--	--	80
To-27.	I:Social Welfare	--	72	--	--	--	--	--	35	--	--	--	--	85
To-28.	I:Office Work Clerical	--	30	--	--	--	--	76	30	--	--	--	--	87
To-29.	I:Office Work Numerical	--	--	--	--	--	--	79	28	--	--	--	--	89
LEE and THORPE														
To-30.	I:Personal-Social	--	71	30	25	--	--	36	--	--	--	27	--	90
To-31.	I:Natural	--	--	--	84	--	--	--	--	-31	--	--	--	95
To-32.	I:Mechanical	73	--	--	42	--	--	--	--	--	--	33	--	95
To-33.	I:Business	--	34	27	--	--	--	81	--	--	--	25	--	98
To-34.	I:The Arts	--	--	84	--	--	25	--	--	--	-34	27	-31	114
To-35.	I:The Sciences	--	--	26	31	--	65	28	--	--	--	29	--	87
TEXAS														
To-36.	I:Business Detail	--	28	--	--	--	--	72	--	--	--	--	--	76
To-37.	I:Business Contact	--	36	29	--	25	--	46	--	--	30	--	--	76
To-38.	I:Humanistic	--	58	--	--	--	--	--	--	29	--	--	--	74
To-39.	I:Mechanical Technical	75	--	--	30	--	--	--	--	26	--	--	--	79
To-40.	I:Manipulative Construct.	51	--	--	49	--	--	--	--	36	--	--	--	71
To-41.	I:Agriculture	--	--	--	79	--	--	--	--	--	--	--	--	78
BRAINARD														
To-42.	I:Commercial	--	48	--	--	--	--	52	--	-27	--	--	--	64
To-43.	I:Personal Service	--	44	--	30	--	--	--	--	--	-30	--	-28	55
To-44.	I:Agriculture	28	--	--	78	--	--	--	--	-27	--	--	--	81
To-45.	I:Mechanical	85	--	--	--	--	--	--	--	--	--	--	--	88
To-46.	I:Professional	--	87	--	--	--	--	--	--	-30	39	--	--	118
To-47.	I:Esthetic	--	42	67	--	--	--	--	--	--	--	--	--	77
To-48.	I:Scientific	38	--	--	--	--	66	26	--	--	--	--	--	82
To-49.	I:------- SIMS Inventory	--	--	--	-26	--	--	--	--	--	--	25	--	29

[1] Interest in mechanics

[2] Contains some Ib

[3] Interest in nature and agriculture

[4] Inventory factor

ANALYSIS Ts

Tschechtelin, S. M. A., Factor analysis of children's personality rating scale. J. Psychol., 1944, 18, 197-200.

The subjects were 300 selected at random from 1600 4th through 8th grade children to whom the 22-Trait Personality Rating Scale had been administered. The variables used were the average rating by 8 classmates. Tetrachoric correlations were used.

LOADINGS ON ORTHOGONAL FACTORS

The 4 factors were left unnamed.

No.	Identifications: Variable	? I	?[1] II	A III	Pe? IV	h^2
Ts- 1.	R:Pep	--	67	--	--	53
Ts- 2.	R:Intelligence	46	53	--	--	50
Ts- 3.	R:Sociability	28	64	39	--	65
Ts- 4.	R:(Nervous)-Calmness	--	54	--	37	48
Ts- 5.	R:Popularity	--	47	--	--	35
Ts- 6.	R:Religiousness	37	--	28	25	29
Ts- 7.	R:Punctuality	49	--	31	--	42
Ts- 8.	R:Courtesy	52	--	--	38	52
Ts- 9.	R:Cooperation	35	--	56	--	50
Ts-10.	R:Generosity	27	--	27	36	27
Ts-11.	R:Persistence	--	--	--	95	96
Ts-12.	R:Honesty	--	--	--	43	26
Ts-13.	R:Neatness	--	25	--	57	42
Ts-14.	R:Patience	32	--	--	--	19
Ts-15.	R:Interests	--	-59	--	41	55
Ts-16.	R:Disposition	--	39	--	44	40
Ts-17.	R:Good Sport	61	--	--	--	46
Ts-18.	R:(Boisterous)-Quietness	49	--	--	--	33
Ts-19.	R:Entertaining	53	--	--	--	32
Ts-20.	R:Thoughtfulness	--	33	--	39	31
Ts-21.	R:Sense of Humor	--	28	--	43	33
Ts-22.	R:Dependability	56	--	--	--	39

[1] Possibly a combination of Su and So.

ANALYSIS Ty

Tyler, F. T. A factorial analysis of fifteen MMPI scales. *J. consult. Psychol.*, 1951, *15*, 451-456.

The subjects were 107 female graduate students at the University of California, Berkeley, preparing to become elementary teachers. Rotation was to both orthogonal and oblique solutions. The two were very similar; only the oblique solution is reported here.

Variables *Ty-1* through *Ty-9* are scales of the MMPI given by name in the table of loadings (see *Analysis Co*).

Variable Ty-10 through Ty-15 are the "Social Scales" of the MMPI.

Ty-10. *Si*, *Social Introversion*. Tendency to avoid social contacts, little dependency upon people

Ty-11. *St*, *Status*. Self-confidence, poise, resourcefulness

Ty-12. *Pr*, *Prejudice*. Cynicism, poor morale, suspiciousness, feelings of ill will, lack of faith in others

Ty-13. *Ac*, *Academic Achievement*. Tenseness, docility, insecurity (producing greater academic output)

Ty-14. *Re*, *Responsibility*. Dependability, integrity, seriousness, steadiness, tenacity

Ty-15. *Do*, *Dominance*. Optimism, persuasiveness, self-discipline, resoluteness

LOADINGS ON OBLIQUE FACTORS[1]

I. General Maladjustment
II. Conflict, Lack of Insight, Dissatisfaction
III. Social Aggressiveness
IV. Social Adjustment, Self Confidence
V. Femininity

No.	Identifications: Variable	Pc I	? II	? III	Mf IV	? V
Ty- 1.	Q:Hypochondriasis	39	--	32	--	33
Ty- 2.	Q:Depression	59	31	--	--	--
Ty- 3.	Q:Hysteria	--	34	39	--	--
Ty- 4.	Q:Psychopathic Deviate	--	--	58	--	--
Ty- 5.	Q:Masculinity	--	--	--	55	-35
Ty- 6.	Q:Paranoia	-34	43	56	--	--
Ty- 7.	Q:Psychasthenia	70	45	--	--	--
Ty- 8.	Q:Schizophrenia	42	--	36	--	--
Ty- 9.	Q:Hypomania	--	-31	44	--	--
Ty-10.	Q:Social Introversion	85	--	-33	--	--
Ty-11.	Q:Status	-54	--	33	48	--
Ty-12.	Q:Prejudice	70	-30	-28	--	--
Ty-13.	Q:Achievement	56	--	--	--	--
Ty-14.	Q:Responsibility	--	48	--	--	--
Ty-15.	Q:Dominance	-46	--	34	33	--

---

[1] Loadings under .30 are not given. h^2 is not computable from data in this article.

ANALYSIS WB

Wittenborn, J. R., Bell, E. G., and Lesser, G. S. Symptom patterns among organic patients of advanced age. *J. clin. Psychol.*, 1951, *7*, 328-331.

The analysis was based upon symptom rating scales for 120 patients at the Connecticut State Hospital at Middletown who were over 60 years of age and who were suffering from a psychological or mental disorder having a known physiological basis. The table of loadings gives an extreme item, somewhat abbreviated, in each of the scales used. The variables are all identical to those in *Analysis WM*. For unabbreviated variables see *Analysis WH*.

LOADINGS ON ORTHOGONAL FACTORS

I. Anxiety
II. Mania and Excitement
III. Paranoid Schizophrenic
IV. Depressive, Deteriorated

No.	Identifications: Variable	Ax I	?[1] II	Ps III	?[2] IV	h^2
WB- 1.	C:Ideas change rapidly	--	50	--	--	26
WB- 2.	C:Delusional belief he is evil	78	--	--	--	62
WB- 3.	C:Gives in easily to others	--	-46	--	--	25
WB- 4.	C:Unaware of others' feelings	--	33	--	59	47
WB- 5.	C:Use made of disease symptoms	--	--	--	--	11
WB- 6.	C:Temper tantrums	--	70	--	--	49
WB- 7.	C:Avoids people	--	--	--	54	33
WB- 8.	C:Shouts and sings	--	68	--	--	48
WB- 9.	C:Incontinent through negligence	--	28	--	42	27
WB-10.	C:Feelings of impending doom	77	--	--	--	65
WB-11.	C:Believes he can't be helped	67	--	--	--	49
WB-12.	C:Thinking clearly delusional	26	--	54	--	42
WB-13.	C:No organic basis for complaints	--	-30	--	26	16
WB-14.	C:Feels systematically persecuted	--	--	72	--	59
WB-15.	C:Believes others influence him	--	--	57	--	34
WB-16.	C:Organic pathology from emotion	--	--	--	38	16
WB-17.	C:Overt activity at a minimum	--	-29	--	26	18
WB-18.	C:Variation in rate of speech	--	45	--	--	27
WB-19.	C:Initiates physical assaults	--	70	--	--	57
WB-20.	C:Characteristically oppositional	--	50	--	36	39

[1] Probably a combination of *Ma*, *Ex*, and *Dt*.

[2] Probably a combination of *Dt* and *-Ma*.

ANALYSIS WH

Wittenborn, J. R., and Holzberg, J. D. The generality of psychiatric syndromes. J. consult. Psychol., 1951, 15, 372-380.

The subjects were 250 patients at the Connecticut State Hospital at Middletown. They included male and female patients admitted during the first 6 months of 1949 who suffered disturbances which were not believed to be due to toxic or neurological factors and who were under 60 years of age. The subjects were rated on symptom rating scales during their first few weeks at the hospital. The pathological extreme of each scale is given in the table of loadings. Four scales out of 55 were omitted from the analysis because of low intercorrelations. With this exception the variables are the same as those in Analysis Wi.

LOADINGS ON ORTHOGONAL FACTORS

I. Paranoid Schizophrenia
II. Excitement
III. Manic State--Depressed State
IV. Anxiety
V. Hysteria
VI. Paranoid Condition
VII. Phobic-Compulsive Reaction

No.	Identifications: Variable	Ps I	$?^1$ II	Ma III	Ax IV	Hy V	? VI	$?^2$ VII	h^2
WH- 1.	C:Acute insomnia	--	53	--	34	--	--	--	51
WH- 2.	C:Ideas change with spontaneous rapidity	--	48	52	--	--	30	--	62
WH- 3.	C:Unjustified sexual beliefs	33	--	--	--	--	--	--	20
WH- 4.	C:Cannot banish obsessive thoughts	--	--	--	34	--	--	49	39
WH- 5.	C:Delusional belief that he is evil	--	--	--	72	--	--	--	57
WH- 6.	C:Gives in easily to others	--	--	-43	--	--	--	--	36
WH- 7.	C:In almost constant movement	--	44	63	--	--	--	25	67
WH- 8.	C:Unaware of the feelings of others	--	70	--	--	--	--	--	56
WH- 9.	C:Use made of physical disease symptoms	--	--	--	--	58	--	--	41
WH-10.	C:Refuses to eat	--	52	--	--	--	--	--	35
WH-11.	C:Deliberately disrupts routines	--	41	48	--	--	--	--	46
WH-12.	C:Temper tantrums	26	27	60	--	--	--	--	54
WH-13.	C:Avoids people	--	31	-50	30	--	--	--	51
WH-14.	C:Shouts, sings, and talks loudly	--	33	69	--	--	--	25	67
WH-15.	C:Behavior disrupted by phobias	--	--	--	--	--	--	59	41
WH-16.	C:Incontinent because of own negligence	--	74	--	--	--	--	--	58
WH-17.	C:Engrossed in plans	--	--	51	--	--	40	--	45
WH-18.	C:Feelings of impending doom	--	--	--	65	--	--	--	46
WH-19.	C:Cannot resist compulsive acts	(Omitted)							
WH-20.	C:Exaggeration of ability and well-being	--	--	61	--	--	36	--	54
WH-21.	C:Unable to stick to or carry out any plans	--	53	--	--	--	35	25	47
WH-22.	C:Cannot believe that he can be helped	--	--	--	65	--	--	--	46

WH

No.	Identifications: Variable	Ps I	?[1] II	Ma III	Ax IV	Hy V	? VI	?[2] VII	h^2
WH-23.	C:Fears others misunderstand him	--	-27	--	30	--	--	--	29
WH-24.	C:Patient's thinking clearly delusional	55	32	--	--	--	--	--	46
WH-25.	C:No organic basis for complaints	--	--	--	--	66	--	--	49
WH-26.	C:Feels systematically persecuted	64	--	--	--	--	--	--	45
WH-27.	C:Believes others influence him	64	--	--	--	--	--	--	48
WH-28.	C:Desperately distressed by his anxiety	--	--	--	44	--	--	37	41
WH-29.	C:Organic pathology with emotional basis	--	--	--	--	68	--	--	47
WH-30.	C:Rigidly orderly	--	-38	--	--	--	--	--	25
WH-31.	C:Dramatically attention-demanding	--	--	49	--	--	--	--	37
WH-32.	C:All overt activity is at a minimum	--	34	-50	--	--	--	--	46
WH-33.	C:Grandiose notions	40	--	--	--	--	32	--	35
WH-34.	C:Does not believe he has a problem	--	42	--	-36	--	--	--	35
WH-35.	C:Compulsive acts continuous	--	--	--	--	--	--	52	33
WH-36.	C:Great variation occurs in rate of speech	--	51	32	--	--	--	26	45
WH-37.	C:Initiates physical assaults	--	62	32	--	--	--	--	58
WH-38.	C:Delusions of homosexual attadks	(Omitted)							
WH-39.	C:Mood changes very frequent and abrupt	--	30	51	--	--	--	26	44
WH-40.	C:Has made attempts at suicide	--	--	--	56	--	--	--	35
WH-41.	C:Failures of affective response	--	33	-43	--	--	29	--	49
WH-42.	C:No concern over physical handicaps	--	--	--	--	48	--	--	26
WH-43.	C:Cannot make decisions	--	53	-40	--	--	25	--	56
WH-44.	C:Opinions exceptional to physical laws	43	26	38	--	--	--	--	44
WH-45.	C:Hallucinations	49	25	--	--	--	--	--	35
WH-46.	C:Memory faults	--	50	-26	--	--	--	--	38
WH-47.	C:Fear of committing an abhorred act	--	--	--	35	--	--	--	19
WH-48.	C:Words not relevant to recognizable idea	--	53	--	-28	--	25	--	53
WH-49.	C:Shows failure and blocking	--	--	--	35	--	--	--	24
WH-50.	C:Repudiates earlier insights	31	--	--	--	--	--	--	23
WH-51.	C:Speech is stilted	--	--	32	--	--	32	--	25
WH-52.	C:Overt homosexual demands	(Omitted)							
WH-53.	C:Lies or steals	(Omitted)							
WH-54.	C:Exaggerated affective expressions	--	27	60	--	--	--	--	48
WH-55.	C:Characteristically oppositional	--	77	--	--	--	--	--	68

[1] Combination of Ex and Dt.

[2] Phobic-compulsive Reaction.

ANALYSIS Wi

Wittenborn, J. R. Symptom patterns in a group of mental hospital patients. J. consult. Psychol., 1951, 15, 290-310.

The subjects were 140 patients at the Northampton Veterans Hospital. Although they were all males, they varied greatly with respect to age, educational attainments, social status, cause of illness, and presenting symptoms. The subjects were rated on symptom rating scales by psychiatrists and psychiatric nurses. The pathological extreme of each scale in somewhat abbreviated form is given in the table of loadings. Five scales out of 55 were omitted from the analysis because of low intercorrelations. With this exception the variables are the same as those in Analysis WH. For unabbreviated variables see Analysis WH.

LOADINGS ON ORTHOGONAL FACTORS

I. Hebephrenic or Deteriorated Schizophrenic
II. Manic-Depressive
III. Conversion-Type Symptoms
IV. Excited, Fulminating Behavior
V. Anxiety or Agitated Depression
VI. Paranoid Schizophrenic
VII. Paranoid

No.	Identifications: Variable	Dt I	Ma II	Hy III	Ex IV	Ax V	Ps VI	? VII	h^2
Wi- 1.	C:Acute insomnia	--	--	--	36	41	--	--	37
Wi- 2.	C:Ideas change rapidly	--	--	--	68	--	--	--	54
Wi- 3.	C:Unjustified sexual beliefs	(Omitted)							
Wi- 4.	C:Obsessive thoughts	--	--	--	38	48	25	--	46
Wi- 5.	C:Delusional belief he is evil	--	-25	--	--	73	--	--	62
Wi- 6.	C:Gives in easily to others	--	-59	--	--	--	--	--	48
Wi- 7.	C:In almost constant movement	--	25	--	48	--	--	--	37
Wi- 8.	C:Unaware of others feelings	52	-25	--	30	--	26	--	56
Wi- 9.	C:Use made of disease symptoms	--	--	73	--	--	--	--	54
Wi-10.	C:Refuses to eat	--	-29	--	--	--	--	--	18
Wi-11.	C:Deliberately disrupts routines		(Omitted)						
Wi-12.	C:Temper tantrums	--	56	--	--	--	--	--	42
Wi-13.	C:Avoids people	--	-54	-25	--	--	--	--	50
Wi-14.	C:Shouts and sings	26	46	--	33	--	--	--	49
Wi-15.	C:Behavior disrupted by phobias	--	--	--	--	51	--	--	34
Wi-16.	C:Incontinent through negligence	47	-41	--	34	--	--	--	54
Wi-17.	C:Engrossed in plans	--	27	33	--	--	--	35	36
Wi-18.	C:Feelings of impending doom	--	--	--	--	69	--	--	56
Wi-19.	C:Cannot resist compulsive acts	--	--	--	42	--	--	-54	52
Wi-20.	C:Exaggerates ability and health	--	36	--	--	--	--	37	37
Wi-21.	C:Can't stick to or execute plans	34	-36	--	26	33	--	--	46
Wi-22.	C:Believes he can't be helped	--	-47	28	--	--	--	35	48
Wi-23.	C:Fears others misunderstand him	--	27	25	--	26	--	25	30
Wi-24.	C:Thinking clearly delusional	--	--	--	33	--	62	25	61
Wi-25.	C:No organic basis for complaints	--	--	63	--	--	--	--	43
Wi-26.	C:Feels systematically persecuted	--	30	--	--	--	36	44	43
Wi-27.	C:Believes others influence him	--	--	--	--	--	64	30	52
Wi-28.	C:Distressed by anxiety	--	--	--	--	78	--	--	70
Wi-29.	C:Organic pathology from emotions	--	--	61	--	--	--	--	43
Wi-30.	C:Rigidly orderly	(Omitted)							

Wi

No.	Identifications: Variable	Dt I	Ma II	Hy III	Ex IV	Ax V	Ps VI	? VII	h^2
Wi-31.	C:Attention-demanding	--	54	25	--	--	--	46	60
Wi-32.	C:Overt activity at a minimum	--	-74	--	--	--	--	--	65
Wi-33.	C:Grandiose notions	--	--	--	26	--	--	42	46
Wi-34.	C:Believes he has no problem	--	--	--	--	-50	32	--	49
Wi-35.	C:Compulsive acts continuous	--	--	--	42	--	--	-47	46
Wi-36.	C:Variation in rate of speech	--	--	--	68	--	--	--	52
Wi-37.	C:Initiates physical assaults	41	44	--	--	--	--	--	43
Wi-38.	C:Delusions of homosexual attacks	(Omitted)							
Wi-39.	C:Mood changes frequent + abrupt	26	34	--	--	--	--	--	34
Wi-40.	C:Has made attempts at suicide	--	--	--	--	59	--	--	41
Wi-41.	C:Failures of affective response	28	-61	--	--	--	--	--	51
Wi-42.	C:Ignores physical handicaps	--	--	62	--	--	--	--	45
Wi-43.	C:Cannot make decisions	--	-68	--	--	--	--	--	59
Wi-44.	C:Opinions exceptional to science	--	56	--	--	--	26	29	52
Wi-45.	C:Hallucinations	--	--	--	33	--	34	--	34
Wi-46.	C:Memory faults	--	-35	-32	67	--	--	--	78
Wi-47.	C:Fears committing abhorred act	--	--	--	--	52	--	--	30
Wi-48.	C:Words with no recognizable idea	--	-41	--	46	--	--	--	43
Wi-49.	C:Shows failure and blocking	--	--	--	--	68	--	--	54
Wi-50.	C:Repudiates earlier insights	30	--	--	50	--	--	--	37
Wi-51.	C:Speech is stilted	--	--	--	-	--	--	36	22
Wi-52.	C:Overt homosexual demands	(Omitted)							
Wi-53.	C:Lies or steals	56	--	--	--	--	--	--	46
Wi-54.	C:Exaggerated affective actions	26	26	31	--	--	32	--	35
Wi-55.	C:Characteristically oppositional	62	--	--	--	--	--	--	43

ANALYSIS WL

Wheeler, W. M., Little, K. B., and Lehner, G. F. J. The internal structure of the MMPI. J. consult. Psychol., 1951, 15, 134-141.

The subjects were 110 neuropsychiatric male patients in a veterans hospital in Los Angeles, ranging in age from 20 to 63 with the mean at 33, and 112 male college students at UCLA. An analysis of the two groups combined as well as separate analyses are reported in the article but the one for the combined group is not reported here. For descriptions of the MMPI scales used as variables see Analysis Co.

LOADINGS[1] ON ORTHOGONAL FACTORS

I. Psychotic
II. Neurotic
III. Not interpreted
IV. Not interpreted

Neuropsychiatric Patients

No.	Identifications: Variable	Pc I	E II	? III	? -IV	h^2
WL1- 1.	Q:Lie score	--	47	--	--	23
WL1- 2.	Q:Correction factor	-70	--	--	--	64
WL1- 3.	Q:Validity scale	67	--	46	--	70
WL1- 4.	Q:Hypochondriasis	53	74	--	--	87
WL1- 5.	Q:Depression	48	65	--	--	74
WL1- 6.	Q:Hysteria	--	84	--	--	77
WL1- 7.	Q:Psychopathic Deviate	70	--	--	--	55
WL1- 8.	Q:Masculinity-Femininity	38	--	--	--	34
WL1- 9.	Q:Paranoia	63	--	59	--	78
WL1-10.	Q:Psychasthenia	94	--	--	--	94
WL1-11.	Q:Schizophrenia	92	--	--	--	88
WL1-12.	Q:Hypomania	62	--	--	--	49

College Students

	Identifications:	Pc	E	?	Su	
WL2- 1.	Q:Lie score	--	35	--	--	24
WL2- 2.	Q:Correction factor	-63	58	--	--	74
WL2- 3.	Q:Validity scale	59	45	--	--	59
WL2- 4.	Q:Hypochondriasis	63	35	--	--	54
WL2- 5.	Q:Depression	50	53	--	-59	89
WL2- 6.	Q:Hysteria	--	78	--	--	61
WL2- 7.	Q:Psychopathic Deviate	56	42	--	--	58
WL2- 8.	Q:Masculinity-Femininity	36	--	54	--	44
WL2- 9.	Q:Paranoia	--	51	35	--	41
WL2-10.	Q:Psychasthenia	91	--	--	--	93
WL2-11.	Q:Schizophrenia	94	--	--	--	91
WL2-12.	Q:Hypomania	--	--	--	59	45

---

[1] Loadings below .35 are not given.

ANALYSIS WM

Wittenborn, J. K., Mandler, G., and Waterhouse, I. K. Symptom patterns in youthful mental hospital patients. J. clin. Psychol., 1951, 7, 323-327.

The analysis was based upon symptom rating scales for 83 functional patients under 60 years of age and newly admitted at the Connecticut State Hospital at Middletown. The table of loadings gives an extreme item, somewhat abbreviated, in each of the scales used. The variables are identical to those in Analysis WB. For unabbreviated variables see Analysis WH.

LOADINGS ON ORTHOGONAL FACTORS

I. Anxiety	IV. Paranoid Schizophrenic
II. Schizophrenic Excitement	V. Conversion Symptom
III. Depressed State (minus)	VI. Residual

No.	Identifications: Variable	Ax I	?[1] II	Ma III	Ps IV	Hy V	? VI	h^2
WM- 1.	C:Ideas change rapidly	--	59	--	35	--	--	52
WM- 2.	C:Delusional belief he is evil	79	--	--	--	--	--	70
WM- 3.	C:Gives in easily to others	--	--	-58	--	37	--	50
WM- 4.	C:Unaware of others' feelings	--	62	--	--	--	--	54
WM- 5.	C:Use made of disease symptoms	--	--	--	50	50	--	58
WM- 6.	C:Temper tantrums	--	54	45	41	--	--	69
WM- 7.	C:Avoids people	26	--	-67	--	--	--	61
WM- 8.	C:Shouts and sings	--	64	39	34	--	--	71
WM- 9.	C:Incontinent from negligence	--	62	--	--	--	--	50
WM-10.	C:Feelings of impending doom	65	--	--	--	--	--	52
WM-11.	C:Believes he can't be helped	80	--	--	--	--	-28	75
WM-12.	C:Thinking clearly delusional	--	25	--	49	-30	--	50
WM-13.	C:No organic basis for complaints	--	--	--	25	74	--	68
WM-14.	C:Feels systematically persecuted	--	--	--	66	--	--	55
WM-15.	C:Believes others influence him	--	--	--	76	--	--	62
WM-16.	C:Organic pathology from emotions	--	--	26	--	68	--	54
WM-17.	C:Overt activity at a minimum	--	--	-59	--	--	--	45
WM-18.	C:Variation in rate of speech	41	50	--	--	--	--	49
WM-19.	C:Initiates physical assaults	--	77	--	--	--	--	65
WM-20.	C:Characteristically oppositional	--	84	--	--	--	--	77

---

[1] Combination of Dt and Ex.

SUPPLEMENTARY ANALYSIS LIST

This list contains references to analyses that have been omitted from full coverage in the survey for reasons other than the general principles of selection laid down in the Introduction. Following each reference, the reason for its omission is briefly explained.

Andrews, T. G. A factorial analysis of responses to the comic as a study in personality. J. gen. Psychol., 1943, 28, 209-224. The factors found pertain to kinds of humor rather than personality traits.

Cattell, R. B. Simple structure in relation to some alternative factorizations of the personality sphere. J. gen. Psychol., 1946, 35, 225-238. This is a re-rotation of Analysis CaA not considered by Cattell to be superior to his original rotation.

Cattell, R. B. The dimensions of culture patterns by factorization of national characters. J. abn. soc. Psychol., 1949, 44, 443-469. The variables were characteristics or statistical data on national groups. Some of the factors resemble personality factors, but they cannot be considered strictly comparable to those derived from analyses of individual scores.

Cattell, R. B., and Gruen, W. Measurement of the primary personality factors in children by means of objective tests. Lab. Pers. Asses. and Group Behavior, Univ. Ill. This is a valiant and extensive analysis of tests in the tradition of Analysis CaD. However, beyond identification of Reaction Time and G, identification with personality factors is not reasonably possible at this time.

Cattell, R. B., and Wenig, P. W. Dynamic and cognitive factors controlling misperception. J. abn. soc. Psychol., 1952, 47, 797-809. This is an ingenious study of psychological processes or mechanisms acting under given stimuli and controlled mood. The authors name the design condition-response factor analysis. The nature of the variables and the stimuli do not lend themselves to comparability on the same terms as analyses covered in this book.

Coffman, W. E. Teacher morale and curriculum development: a statistical analysis of responses to a reaction inventory. Thesis. Adv. Sch. Educ., Teacher Coll., Columbia Univ., 1949. Concerns behavior with respect to a situation too specific to teaching to be included here.

Darling, R. P. Autonomic action in relation to personality traits of children. J. abn. soc. Psychology., 1940, 35, 246-260. Of the 4 factors, one reflects halo, 2 reflect overlapping error variance.

Duffy, E. Level of muscular tension as an aspect of personality. J. gen. Psychol., 1946, 35, 161-171. General factor found. The factors found are not comparable to personality factors.

Ewart, E., Seashore, S. E., and Tiffin, J. A factor analysis of an industrial merit rating scale. J. appl. Psychol., 1941, 25, 481-486. Concerns behavior with respect to a situation too specific for inclusion here.

Eysenck, H. J. Schizothymia-Cyclothymia as a dimenion of personality: II. Experimental. J. Personality, 1952, 20, 345-384. The structure here is fairly simple, although the rotation was not done with this in mind. The variables, however, are mainly tests that are not directly interpretable in terms of personality factors.

Ferguson, L. W. A factor study of the traits of the Dionne quintuplets. Psychol. Rec., 1940, 4, 1-8. Inadequate structure. One general factor of maturation; the others are uninterpretable.

Fiske, D. W. Consistency of the factorial structures of personality ratings from different sources. J. abn. soc. Psychol., 1949, 44, 329-344. Structure is poor and interpretation is hampered, because the positive direction of the variables is not indicated.

French, J. W. The West Point tryout of a comparative prediction battery. Unpublished. This is a large analysis devoted mainly to aptitude tests and course grades, but it includes 6 information scores for interest measurement and a leadership rating. Factor Is appears in the information tests with a high loading on science and a lower one on mechanics and art. A factor with a high loading on social information and a lower one on athletic information and leadership rating may be Factor Gr.

Gannon, J. F. A statistical study of certain diagnostic personality traits of college men. Stud. Psychol. Psychiat., Cathol. U. Amer., 1939, 4, pp. 45. Interpretation was not possible partly because of unclear structure. The analysis used rating items selected from a larger group of items on the basis of their high intercorrelations. They were all in an "extrovert group" of items, probably too homogeneous to analyze successfully.

Gibb, C. A. Personality traits by factorial analysis (III): item analysis of personal inventory. Aust. J. Psychol. Phil., 1942, 20, 203-227. Inadequate structure probably resulting from failure to extract all the factors. Very similar items have very different loadings.

Gordon, L. V. A comparison of the validities of the forced-choice and questionnaire methods in personality measurement. Ohio State U., 1950. Thesis. Includes 2 analyses of 150 questionnaire items each. Use of Wherry-Doolittle method of analysis restricts number of factors extracted to those aimed for in the item construction.

Gordon, O. J. A factor analysis of human needs and industrial morale. 1952. Unpublished thesis. Univ. Utah. General morale factor and four others pertaining to fulfillment of needs. The factors may be specific to this industrial situation and could not as yet be directly related to personality factors.

Guertin, W. H. A factor analysis of some Szondi pictures. J. Clin. Psychol., 1951, 7, 232-235. Clusters among the Szondi scales cannot yet be compared directly with personality factors.

Guertin, W. H. A factor analysis of the Bender-Gestalt tests of mental patients. J. clin. Psychol., 1952, 8, 362-367. The factors derived from the mechanical responses to the Bender-Gestalt cannot yet be related to personality factors, because other personality variables were not included in this analysis.

Hampton, N. D. An analysis of supervisory ratings of elementary teachers graduated from Iowa State Teachers College. *J. exp. Educ.*, 1951, *20*, 179-215. The ratings are too specific to the attitude of teachers toward their job and do not seem to reflect personality directly.

Harsh, C. M. A factorial analysis of the responses to an annoyance inventory. *Psychol. Bull.*, 1935, *32*, 535. Annoyances have the same logical relation to personality measurement that interests have, but there have not yet been enough analyses of annoyances to have structured them in a way that a survey of them would be contributory.

Hellfritzsch, A. G. A factor analysis of teacher abilities. *J. exp. Educ.*, 1945, *14*, 166-199. Variables include intelligence tests, whole inventories and scales, and teachers attitude and ability measures. The factors are either too specific to teaching or difficult to interpret because of the complexity of the variables.

Hsü, E. H. The Rorschach responses and factor analysis. *J. gen. Psychol.*, 1947, *37*, 129-138. The factors in this area are not directly comparable to personality factors.

Hsü, E. H. Comparative study of factor patterns, physiologically and psychologically determined. *J. gen. Psychol.*, 1952, *47*, 105-128. An interesting novel approach, but not strictly an analysis of personality measurements.

Hughes, R. M. A factor analysis of Rorschach diagnostic signs. *J. gen. Psychol.*, 1950, *43*, 85-103. The Rorschach variables used here were those described in the literature as diagnostic of psychoneurosis, organic pathology, or schizophrenia. Nevertheless, the factors are not directly comparable to personality factors.

Kleemeier, R. W., and Dudek, F. J. A factorial investigation of flexibility. *Educ. psychol. Meas.*, 1950, *10*, 107-118. In this analysis of aptitude tests some of which required shifts of task, only aptitude factors appeared.

Koch, H. L. A multiple-factor analysis of certain measures of activeness in nursery school children. *J. gen. Psychol.*, 1934, *45*, 482-487. and Koch, H. L., and Streit, H. A study in rating technique with special reference to activity in preschool children. *J. gen. Psychol.*, 1932, *41*, 330-357. The factors pertain to categories of play rather than personality traits.

Mac Crone, I. D., and Starfield, A. A comparative study in multiple-factor analysis of "neurotic" tendency. *Psychometrika*, 1949, *14*, 1-20. Inadequate structure.

Martin, G. C. A factor analysis of the Bernreuter Personality Inventory. *Educ. psychol. Meas.*, 1948, *8*, 85-92. The factors are produced by overlapping items.

McCloy, C. H. A factor analysis of personality traits to underlie character education. *J. educ. Psychol.*, 1936, *27*, 375-387. This study shows one almost general factor probably produced by rating halo. The effect may be exaggerated since the study used 43 variables with only 31 subjects. Uses Webb's intercorrelations.

Moore, T. V., and Hsü, E. H. Factorial analysis of anthropological measurements in psychotic patients. Human Biology, 1946, 18, 133-157. The factors in this area are not directly comparable to personality factors. Inadequate structure.

Oliver, J. A., and Ferguson, G. A. A factorial study of tests of rigidity. Canad. J. Psychol., 1951, 5, 49-59. The factor identified as Rigidity by the author seems to the present writer more like the Army Air Force's factor called Integration. This places the analysis in the aptitude rather than the personality domain.

Rafferty, J. A., and Deemer, W. L., Jr., Factor analysis of psychiatric impressions. J. educ. Psychol., 1950, 41, 173-183. Inadequate structure. Variables not easily compared with personality factors.

Rees, W. L., and Eysenck, H. J. A factorial study of some morphological and psychological aspects of human constitution. J. ment. Sci., 1945, 91, 8-21. The factors in this area are not directly comparable to personality factors. Inadequate structure.

Reyburn, H. A., and Raath, M. J. Primary factors of personality. Brit. J. Psychol. Stat. Sec., 1950, 3, 150-158. The data consisted of ratings of a different pair of subjects for each of 80 observers. The rotated loadings are not presented in the article.

Roff, M. A factorial study of the Fels Parent Behavior Scales. Child Dev., 1949, 20, 29-45. The factors are those pertaining to the specific behavior of parents toward children. This is too specific for inclusion here.

Ryans, D. G. A study of criterion data (a factor analysis of teacher behaviors in the elementary school). Educ. psychol. Meas., 1952, 12, 333-344. Concerns behavior with respect to a situation too specific to teaching for inclusion here.

Ryans, D. G., and Wandt, E. A factor analysis of observed teacher behaviors in the secondary school: a study of criterion data. Educ. psychol. Meas., 1952, 12, 574-586. Concerns behavior with respect to a situation too specific to teaching for inclusion here.

Scheier, I. H., and Ferguson, G. A. Further factorial studies of tests of rigidity. Canad. J. Psychol., 1952, 6, 18-30. The factor of "cognitive rigidity" that was found seems to be an aptitude factor. See Oliver and Ferguson (Supp. Analysis).

Schmid, J., Jr. Factor analysis of prospective teacher's differences. J. exp Educ., 1950, 18, 287-319. Concerns an area to specific for inclusion here. Inadequate structure.

Strong, E. K., Jr., and Tucker, A. C. The use of vocational interest scales in planning a medical career. Psychol. Monog., 1952, 66, 48-51. Too specific for inclusion here, particularly because measurement of closely allied interests by the Strong Blank means an overlapping of the variables. A medical interest factor was found, and Factor Iw is defined by Personnel Manager, two Psychiatrist scales, Psychologist, and Internist.

Thurstone, L. L. Factor analysis of body types. *Psychometrika*, 1946, *11*, 15-21. The factors in this area are not directly comparable to personality factors.

Vernon, P. E. An analysis of the conception of morale. *Char. and Pers.*, 1941, *9*, 283-294. The area studied here, attitude toward the war, is too specific to be interpreted in terms of personality factors. Inadequate structure.

Vernon, P. E. Classifying high-grade occupational interests. *J. abn. soc. Psychol.*, 1949, *44*, 85-96. The data are average ratings by judges of the likeness of job titles; the judges' own interests were not being measured. An unusual type of correlation coefficient is used; rotation was done on the second, third, and fourth factors, leaving the first as a general "gregariousness" factor; all the factors were not extracted. In spite of these things the resulting factors bear a close resemblance to those in *Analysis CD*.

Wenger, M. A. A further note on the measurement of autonomic balance. *Psychosom. Med.*, 1941, *3*, 427-434; 1942, *4*, 94; 1943, *5*, 148-151; *Human Biology*, *1942, 14, 69-84*. The factors in this area are not directly comparable to personality factors.

Wenger, M. A. An attempt to appraise individual differences in level of muscular tension. *J. exp. Psychol.*, 1943, *32*, 213-225. The factors in this area are not directly comparable to personality factors.

Whisler, L. D. Multiple-factor analysis of generalized attitudes. *J. soc. Psychol.*, 1934, *5*, 283-297. Analyzed by grouping method, but structure is not clear. Variables were subjected to a selective process.

Winne, J. F. The factorial composition of normal and neurotic responses to an adaptation of the MMPI. 1949, Univ. Mich., Univ. Microfilms, Ann Arbor, Mich. Inadequate structure.

Wittenborn, J. R. A factor analysis of discrete responses to the Rorschach ink blots. *J. consult. Psychol.*, 1949, *13*, 335-340. The factors in this area are not directly comparable to personality factors.

Wittenborn, J. R. A factor analysis of Rorschach scoring categories. *J. consult. Psychol.*, 1950, *14*, 261-267. The factors in this area are not directly comparable to personality factors.

Wittenborn, J. R. Level of mental health as a factor in the implications of Rorschach scores. *J. consult. Psychol.*, 1950, *14*, 469-472. The factors in this area are not directly comparable to personality factors.

PART II

FACTORS

The factors which have been identified in at least two analyses with sufficient certainty to receive a name are described in Part II. Each factor has been given code letters to denote its name. A capital letter ordinarily stands for the first letter in the name. A second letter or first letter in the second word of the name is sometimes added as a small letter. The code designation appears at the top of every page of Part II. The descriptions of the factors appear in alphabetical order by these code designations. At the back of the volume there is an index of factor names (Index III) including both those used by the writer and those used by the authors of the analyses. For each factor the following items are presented:

1. The factor name and code letters. These are given in the heading for each factor. The name represents the interpretation of the writer which tries to be most helpful in the light of all the literature covered, but which, while being influenced by suggested names, is not necessarily the same as the name given by any author who found the factor.

2. List of analyses. The analyses in which the factor appears are listed by their code letters. To the right of the code letters a question mark is used to indicate the uncertain identification of the factor in that analysis; a question mark with "c" indicates that the factor was combined with some other factor in the analysis.

3. Description of the factor. Following a brief, formal definition of the factor, there is some comment on its clarity of identification and specific problems that were encountered. It was not thought worth-while to enter into a prolonged discussion of reasons for all the cross-identifications that were made. Such an endeavor would result in a cumbersome demonstration of ratiocination and rationalization. In this survey, as compared to Psychometric Monograph, No. 5, fewer cross-identifications could be made with the benefit of overlapping variables; more had to be made on the basis of psychological interpretation. Unfortunately the standard for accepting a cross-identification could not be placed very high lest the survey lose its value because of sheer negativism. The reader must judge the usefulness of the cross-identifications with reference to his particular problem.

4. List of variables. The variables which are the best measures of the factor are listed. For each variable is given its name or short description, references to the analyses in which it appears and the factor loadings found in those analyses. The variables are listed in an order derived from (1) their loadings on the factor, (2) the frequency with which they appeared in analyses which separated the factor, and (3) the smallness of loadings on other factors. This complication was introduced in what is thought to be a moderately successful effort to cause the variables at the top of the list to be most truly representative of the factor. Nevertheless, the presence of composit factors, differences in statistical method between analyses, the reliability of variables, and probably many other irrelevant elements affect size of loadings and consequent position in the list. It is possible that the writer could have used his judgment in correcting for these elements, and so could have arrived at a more appropriate order of variables in the list. However, it seemed wiserto be objective and to let the reader be cautious.

5. Supplementary Factor List. At the end of Part II there appears a list of the factors whose interpretation seems possible, but which are not described in full, because they were identified in one analysis only.

FACTOR A: Agreeableness

Analyses:
BaB
Bo
BrA?
BrB
CaA
CaB
CaC
HJ?
Ho?c
Ko?
Lo
MD?
Ri?
RTA
ThB
Ts

Readiness both to comply with the desires of others and to initiate activity that will serve the desires of others through understanding and tolerating their needs.

An alternative name for this factor might be cooperativeness. This term, however, is too specific, although a tendency to cooperate could produce the other or parallel traits that characterize the factor, namely: agreeableness, affection, sympathy, good personality, kindness, and good nature. This is Cattell's Factor A, Cyclothymia - Schizothymia. Cyclothymia is evidently used here by Cattell as an opposite of the withdrawn, anti-social attitude of the schizoid personality, rather than as an indication that this factor gives evidence for cyclical moods.

Tests with high loadings on this factor:

1. R:Rating on cooperation.
   BaB-3 (A60); Bo-8(A58,De38,?33,?30,J?25); Ts-9(A56,?35)
2. Q:Guilford-Martin Personnel Inventory I, Cooperativeness score.
   ThB-13 (A72,?43); Lo-13 (A69,E?-36,Cd?-25)
3. Q:Guilford-Martin Personnel Inventory I, Agreeableness score.
   ThB-12 (A66); Lo-12 (A75,Cd?-33)
4. R:Tendency to be affectionate.
   BrB-22 (A78)
5. R:Sympathetic.
   BaB-21 (A50); BrB-19 (A69)
6. R:Readiness to cooperate vs. obstructiveness.
   CaB-1 (A49,?-47); CaC-1 (A55,Pe45); SaB-81 (?-21+)
7. R:Degree of corporate spirit in college, school, country, etc.
   RTA-12 (A66,?46)
8. R:Personality.
   Bo-1 (A63,?38,?37)
9. R:Out-going, idealistic, cooperative vs. anti-social, schizoid.
   CaA-14 (A59,So32)
10. R:Tendency to do kindnesses on principle.
    RTA-11 (A59,Pe49,Ei?-47)
11. R:Good-natured, easy-going vs. spiteful, grasping, critical.
    CaC-12 (A50); CaB-12 (A34,Pe25); SaB-92(--)
12. R:Good-natured, easy-going vs. surly, hard.
    CaA-9 (A51,Do-28)
13. R:Natural, friendly, open vs. spiteful, tight-fisted, superstitious.
    CaA-19 (A49,So31,Su27)

Factor Al: Alertness

Analyses: GuB
RTC

Awareness of surroundings, lack of absent-mindedness.

Perception of one's own alertness is probably fairly accurate, since its opposite, absent mindedness, is very apparent and is thus readily admitted. For this reason the questionnaire method is satisfactory for this factor.

Tests with high loadings on this factor:

1. Q:Usually keeps in close touch with things going on around him.
   GuB-9 (A178); RTC-9 (A163,So49)
2. Q:Not less attentive than most individuals to things going on around him.
   GuB-21 (A175); RTC-21 (A157,So55)
3. Q:More alert to immediate surroundings than the average person.
   CaE-39 (--); GuB-30 (A154); RTC-30 (A155); SaB-39 (So59)

FACTOR Au: Autistic Tendency

Analyses: Bt La
CaE?c SaB
Mo

Habit of using reverie to escape from the unpleasantness of an environment felt to be threatening.

Although daydreaming is the predominant quality for this factor, the association of anxiety with it is important. A tendency to daydream creatively or to daydream as a result of monotonous manual work would not be included. Variable 4 indicates that books as well as daydreams can sometimes provide the desired escape.

Tests with high loadings on this factor:

1. Q:Daydreams.
   BT-1 (Au52, Gs-34); CaE-11 (?36,?-28,Ne-26);GuA-13 (Cd42,Sf-31); Mo-13 (Au62); SaB 11 (Au70)
2. Q:Has fits of anxiety or dread without reason.
   SaB-41 (Au61), CaE-41 (?41,?34)
3. Q:Often feels lonesome with other people.
   BT-12 (Au48,Gs-44); CaE-8 (?76); CSA-17 (?61); Mo-4 (Lo68,Au47); SaB-8 (?60,Ip36,Au26,?26)
4. Q:Books have been more entertaining than companions.
   BT-9 (Au55,Gs-52)
5. Q:Daydreams instead of doing work.
   La-43 (Au50,Cd40,Ne39)
6. Q:Frequently burdened by a sense of remorse.
   Mo-9 (Au48,Cd30,Lo27)
7. Q:Ideas run through head so as to prevent sleep.
   Mo-8 (Au47,E26)
8. Q:Often feels worried or tense without cause.
   SaB-7 (Au45,?43); CaE-7 (?70)

FACTOR Ax: Anxiety

Analyses:
Be?
WB
WH
Wi
WM

Unshakable fear or uneasiness without external reference.

Also called free-floating anxiety. It has been identified as a factor only with abnormal subjects. See also Factor Cd.

Tests with high loadings on this factor:

1. C:Feelings of impending doom.
   Wi-18 (Ax69); WB-10 (Ax77); WM-10 (Ax65); WH-18 (Ax65)
2. C:Delusional belief that he is evil.
   Wi-5 (Ax73,Ma-25); WB-2(Ax78); WM-2 (Ax79); WH-5 (Ax72)
3. C:Cannot believe that he can be helped.
   WB-11 (Ax67); WM-11 (Ax80,?-28); WH-22 (Ax65); Wi-22(Ma-47 ?35,Hy28,Ax--)
4. C:Desperately distressed by his anxiety.
   Wi-28 (Ax78); WH-28 (Ax44,?37)
5. C:Has made attempts at suicide.
   WH-40 (Ax56); Wi-40 (Ax59)
6. C:Shows failure and blocking.
   Wi-49 (Ax68); WH-49 (Ax35)

FACTOR Cd: Cycloid Tendency

Analyses:
CaE?c
Dt?
Fl?c
GuA
GuB?
La
Lo?
Mo
No?
RTB
SaB?c
ThB?

Alternation between normalcy and depression without external reference.

The periods of low mood are without reference to reality, but differ from the state described as Factor Ax by being moods of depression rather than of fearfulness. See also Factor Lo.

Tests with high loadings on this factor:

1. Q:Has ups and downs in mood without cause.
   Mo-38 (Cd85,Au25); RTB-10 (Cd74)
2. Q:Has ups and downs in mood.
   GuA-23 (Cd57); La-26(cd82)
3. Q:Feelings alternate between happiness and sadness without reason.
   Mo-11 (Cd81,Au27)
4. Q:Frequently has spells of the blues without reason.
   La-30 (Cd80,Ne32,E29,Mp25)
5. Q:Inclined to worry over possible misfortunes.
   GuA-15 (Cd54); GuB-10 (Cd?63); Mo-10 (Cd41,Au32,So-25); RTB-4 (E?35,Cd30); RTC-10 (Mp38,Rh-34,So-26,?-26)
6. Q:Often just miserable for no sufficient reason.
   CaE-6 (?69); La-34 (Cd81,E34); Mo-26 (Lo56,Cd43,E30); SaB-6 (?45,Sc-45, Au33)

FACTOR Cu: Culture

Analyses: CaA? CaC
CaB SaB?

Sufficient intelligence combined with the intellectual and artistic interests characteristic of polite society.

A factor in the aptitude-achievement domain based on only one analysis[1] was named Culture in Psychometric Monograph, No.5. To call this one and that the same factor is not inconsistent with the slim evidence for its identification in either domain. This is Cattell's Factor K.

Tests with high loadings on this factor:

1. R:Intellectual, cultured vs. boorish.
   CaB-10 (Cu39,Pe32,Su26); CaC-10 (Cu56) SaB-90 (Pe34+,?27+,Ip23+,Cu?21+)
2. R:Polished vs. clumsy, awkward.
   CaB-21 (Cu32); CaC-21 (Sf78,Cu57,Ei-26,Su-25); SaB-101 (Pe30+,Cu?--)

FACTOR Cv: Conventionality

Analyses: CaB CM
CaC CSA?
CaF SaB

Favorable attitude toward strict conventionality vs. eccentricity with artistic and intellectual interests.

This is not a clearly defined factor. In the positive direction it seems to combine stable or conservative attitudes with prudery and neatness. In the negative direction lack of conventionality may be a reflection of neglect caused by an infatuation with being artistic and intellectual. This is Cattell's Factor M, Spiessburger Concernedness vs. Bohemian Intellectualism. The component of intellectuality is based only on the poor evidence of variables 9 and 10. These constitutethe only evidence for cross-identification with the factors in Analyses CaF and CM. If it were not for variable 3 below, these factors could have been identified as Factor Ie. It is also possible that the factor in Analyses CaF and Cm should be identified as Factor G.

Tests with high loadings on this factor:

1. X:Does not want to listen to music.
   CaF-11 (Cv52); CM-15 (Cv52,If-27, ?-25)
2. J:Annoyed by violation of manners or morals.
   CaE-77 (?-69,?57) SaB-77 (Cv58,Sf31)
3. X:Does not want to know more science.
   CaF-16 (Cv50); CM-16 (Cv33,Ia?31)
4. J:Agrees that family gives more happiness than many friends.
   CaE-72 (Sf?-31),SaB-72 (Cv53)

---

[1] Carroll, J. B. The factorial representation of mental ability and academic achievement. Educ. psychol. Meas., 1943, 3, 307-332.

FACTOR Cv (Continued)

5. X:Wants to be smartly dressed.
   CaF-36 (Cv52,?30)
6. J:Favors subservience to the state and anti-vivisection vs. nudity and free sex.
   CaE-69 (?32,Re30,?-27); SaB-69 (Se54,Cv50)
7. R:Conventional vs unconventional, eccentric.
   CaB-25 (Cv32); CaC-25 (Cv37,?-25); SaB-105 (Pe27+,Ss-22+,Do-20+)
8. X:Does not like to see fine paintings and sculpture.
   CaF-3 (Cv44)
9. R:Practical, logical vs. sensitively imaginative.
   CaB-29 (Cv32,?-28,Cu-28,Do?25); SaB-109 (E-23+,Se-22+,Do-21+,Cv--);
   CaC-29 (E-40,A-36,Cu-32,Cv27)
10. R:Lacking artistic feeling vs esthetically fastidious.
    CaB-31 (?-35,Cv--); CaC-31 (Sf-42,Cu-41,So?-34,Cv31); SaB-111 (Cv--)

FACTOR De: Dependability

Analyses: BC? Kr
Bo St2
BrB

Disposition to comply exactly with the requirements of authority.

With the exception of Analysis Bo, the existence of this factor results from the reactions and behavior of school children. Even with Analysis Bo included, there is some reason to feel that this factor is concerned with a superficial kind of dependability. However, the kind of dependability on a job that we consider important may differ from this factor only by combining intelligence or, perhaps, honesty with it. Slim evidence that this is a different factor from Persistence is provided by Analysis Kr. Fair evidence that it differs from Intelligence is provided by Analysis BrB. There is no evidence concerning its independent existence from Honesty.

Tests with high loadings on this factor.

1. R:Punctuality.
   Bo-3 (De68,?33,A28); Ts-7(?49,A31)
2. Q:Does not like to be late for an appointment.
   St1-51 (?41,Gs?-30); St2-24 (De65)
3. R:Relied on to do chores around school.
   Kr-12 (De65,Ei?51,Pe?44,?25)
4. R:Keeps his promises.
   Kr-10 (De64,G49,Wi-37)
5. R:Dependability.
   Bo-7 (De64,A39,?38,?32); Ts-22 (?56)
6. R:Is obedient.
   Kr-15 (De63,Ei?39,Pe?38)
7. R:Diligent attitude toward school work.
   BrB-5 (De61)
8. R:Thoroughness.
   Bo-4 (De57,?50,?39)
9. R:Obedience in class.
   BrB-8 (De55)

FACTOR De (Continued)

10. Q:Not usually late for school or work.
    Stl-1 (Gs?-44); St2-33 (De55,Gs?-26)
11. Q:Is self-reliant.
    Stl-3 (Gs?-37,Ss31,?30); St2-43 (De50,?33)
12. R:Reliability: preparing homework, keeping promises, honesty, diligence.
    BrB-4 (De49,G30)

FACTOR Do: Dominance

Analyses: BC Gi?c SaB
CaA HJ? SB
CaB? Ho? ThB?
CSA? La

Habit of speaking so as to cast oneself in a superior light.

This factor represents dominance in the sense of variability in amount of dominating or aggressive behavior, mainly verbal behavior. Actual superiority of status or motivation to attain such status by effort or ingenuity is not implied. It is likely that this kind of aggressiveness stems from frustration or other maladjustment, but the factorial data throws no light on that. This is Cattell's Factor E.

Tests with high loadings on this factor:

1. R:Buddy rating on dominance.
   SB-11 (Do82,?26)
2. Q:Sometimes tries to argue or bluff his way past a guard or doorman.
   CaE-16 (?41,?-27); La-29 (Do61);SaB-16 (Do62,So28,?26)
3. Q:Questionnaire on overt aggression.
   BC-7 (Do69,Ss?27)
4. R:Buddy rating on aggressiveness.
   SB-13 (Do66)
5. Q:Sometimes "heckles" a public speaker.
   BT-6 (Ss-30); La-35 (Do55)
6. Q:Self rating on dominance.
   SB-12 (Do52,?27)
7. Q:Complains about bad food in a restaurant.
   CaE-15 (G?34,?31); SaB-15 (Do52,?-41)
8. Q:Sometimes upbraids a workman who fails to have his work done on time.
   La-31 (Do51)
9. Q:Questionnaire on overt aggression.
   BC-20 (Do51,?40,Me-25)
10. Q:Questionnaire on sadism.
    BC-8 (Do50,?-28)
11. R:Self assertive vs. self submissive.
    CaA-1 (Do39,A-33)
12. R:Wilful,egotistic, predatory vs. mild, self-effacing, tolerant.
    CaA-7 (Do35,A-31)

FACTOR Dt: Deterioration

Analyses:
LW
WB?c
WB?c
WH?c
Wi
WM?c

Non-compliance with ordinary social requirements because of poor understanding characteristic of dementia.

This factor has been found only with abnormal subjects. It seems possible that it could represent variance at the unfavorable end of Factor A, but there is no objective evidence for or against this possibility.

1. R:Elgin Stubborn Traits scale.
   IW-10 (Dt84)
2. R:Elgin Careless Indifference scale.
   LW-9 (Dt84)
3. C:Characteristically oppositional.
   Wi-55 (Dt62);WH-55 (?77); WM-20 (?84); WB-20 (?50,?36)
4. C:Lies or steals.
   Wi-53 (Dt56); WH-53 (omitted: low correlations)
5. C:Unaware of the feelings of others.
   Wi-8 (Dt52,Ex30,Ps26,Ma-25);WB-4 (?59,?33); WH-8 (?70); WM-4 (?62)
6. C:Incontinent because of own negligence.
   Wi-16 (Dt47,Ma-41,Ex34);WB-9 (?42,E?28) WH-16 (?74); WM-9 (?62)

FACTOR E: Emotionality

Analyses:
Ab1?
Ab2?c
CaA
CaC
CaD?
CE
Co
CSA?
CW?c
Ey
FK?
Gi?c
HJ?
Ho?
Lo?
Ia
MD
Mo
RTB
RTD?
SaB
WL1
WL2

Chronic excessiveness of emotionality and its attendant symptoms or neurotic tendency.

This factor represents the continuum from the normal, calm, though somewhat phlegmatic disposition to the neurotic, maladjusted, highly emotional disposition often accompanied by nervous fatigue and psychosomatic symptoms. The coverall nature of the terminology in this area makes it hard to be confident of the cross-dientifications. However, this does seem to be one of the most universally important of the personality factors. This is evidently the characteristic called general neuroticism or neurotic tendency, but its important variability within the normal range makes this terminology inappropriate. It is the inverse of Cattell's Factor C. See Factor Hy and Analysis Abl for possible sub-factors.

Tests with high loadings on this factor:

1. Q:MMPI Hysteria scale.
   Co-5 (E70); Abl-11 (E?55,?33); Ab2-11 (?82); CW-5 (Su-43,Mf35,Ho-34, ?28); Ty-3 (?79); WL1-6 (E84); WL2-6 (E78)

FACTOR E (Continued)

2. C:Hypochondriasis.
   CE-33 (E86,B31,F?-28); Ey-33 (E79,Pc36)
3. C:Fatigue, lassitude or effort intolerance.
   CE-20 (E73); Ey-20 (E63,?26)
4. Q:MMPI Depression scale.
   Co-4 (E51); Ab1-10 (E?49,?37,?26); Ab2-10 (?84,?26); CW-4 (Su-48,A28); Ty-2 (Pc59,?31); WL1-5 (E65,Pc48); WL2-5 (Su59,E53,Pc50)
5. R:Neurotic fatigue vs. absence of neurotic fatigue.
   CaB-30(--); CaC-30 (E62,?30); SaB-110 (E46+)
6. Q:Considers self more emotional than average.
   La-37 (E70)
7. R:Worrying, anxious vs. placid.
   CaB-26 (Do?-35,A-31,?-26,Cv25); CaC-26 (E65); SaB-106 (E28+,Ss26+)
8. Q:MMPI Hypochondriasis scale.
   Co-3 (E61,Pc36);Ab1-9 (?53,?25,E?--); Ab2-9 (?86); CW-3 (?79); Ty-1 (Pc39,?32); WL1-4 (E74,Pc53); WL2-4 (Pc63,E35)
9. R:Hypochondriacal vs. not hypochondriacal.
   CaB-14 (Do?-26); CaC-14 (E52,?40); SaB-94 (E36+)
10. Q:Feelings easily hurt.
    CaE-4 (?53,Ne29); GuA-25 (Cd56); Mo-6 (E52,Cd25); SaB-4 (Ne50,E44,?41, Sc25)
11. Q:Indulges in self-pity.
    RTB-5 (E62,Cd-32)
12. R:Emotional vs. calm, phlegmatic.
    CaB-13 (Su39,?35,A-26); CaC-13 (E56); SaB-93 (E26+,So24+,Pe23+)
13. C:Fainting fits.
    CE-22 (E49,F?-25); Ey-22 (E42)
14. Q:Bell Adjustment Inventory, Health scale.
    Co-32 (E37,Pc37); MD-9 (E46,?33)
15. Q:Easily moved to tears.
    La-28 (E52,Sc-32,Sn28)
16. Q:Thinks that through tenseness, he uses up more energy than most people.
    CaE-32 (?42,?32,Ne31); SaB-32 (E49);
17. Q:Cannot stand criticism.
    Mo-17 (E47,Sc-31)
18. Q:Considers self a nervous person.
    Mo-5 (E45)
19. R:Demoralized, autistic vs. realistic, facing life.
    CaA-10 (E42,G-39,Pe-31)
20. Q:Walks and talks in sleep.
    CaE-42 (?57,G?37,?-29); SaB-42 (E42,Au35)
21. Q:Does not keep head in excitement.
    RTB-6 (E42)
22. Q:Bell Adjustment Inventory, Emotional scale.
    Co-34 (Pc67,E--); MD-11 (E74,So?31)
23. R:Active, neurotic, creatively unstable vs. self-controlled, rigid, conventional.
    CaA-16 (E36)
24. R:General emotionality (with maladjustment) vs. unemotional.
    CaA-20 (E36,Se25)

FACTOR Ei: Emotional Immaturity

Analyses: BC? CaB?c HJ
BrB CaC Kr?
CaA CSA?c RTA?

Lack of control of emotional reactions which result from frustration.

This is an emotionality factor representing a type of behavior characteristic of children who desire attention, who are impatient and demanding, or who are, in less erudite language, spoiled. The factor has been found, however, in college-student groups as well as in children. This is Cattell's Factor D.

Tests with high loadings on this factor:

1. R:Tendency to look for sympathy.
   BrB-28 (Ei70)
2. R:Forwardness; not timid, modest or retiring.
   BrB-34 (Ei69)
3. C:Attention-getting behavior.
   HJ-15 (Ei68)
4. R:Conceit
   BrB-29 (Ei64)
5. R:Quarrelsomeness.
   BrB-30 (Ei64)
6. C:Over-aggressiveness.
   HJ-12 (Ei56)
7. C:Bravado.
   HJ-17 (Ei50)
8. R:Infantile, demanding, self-centered vs. emotionally mature, adjusting to frustration.
   CaA-27 (Ei50,E37,Se28,Pe-27)
9. R:Restlessly, sthenically, hypomanically emotional vs. calm, self-effacing, patient.
   CaA-26 (Ei41,E38)
10. R:Demanding, impatient vs. emotionally mature.
   CaB-24 (Pe-37,?36,A-35); CaC-24 (Ei30,A-25); SaB-104 (E26+)

FACTOR Ex: Excitement

Analyses: WB?c WH?c Wi WM?c

Rapid shifting of ideas and direction of attention.

This factor has been found separately only in one analysis with abnormal subjects. It may represent the unfavorable end of Factor Pe, but there is no objective evidence for or against this possibility.

Tests with high loadings on this factor:

1. C:Ideas change with spontaneous rapidity.
   Wi-2 (Ex68); WH-2 (Ma52,?48,?30); WB-1 (?50);WM-1 (?59,Ps35)
2. C:Great variation occurs in rate of speech.
   Wi-36 (Ex68);WH-36 (?51,Ma32,?26); WB-18 (?45); WM-18 (?50,Ax41)
3. C:Memory faults.
   Wi-46 (Ex67,Ma-35,Hy-32); WH-46 (?50,Ma-26)

FACTOR Fe: Fearfulness

Analyses: CaF CM

Subject to chronic fear of dangers in the culture.

Compare with *Factor Ax* where fear is abnormal in the sense that there is no real danger, no external reference. This factor represents variance in the amount of admitted fear of the continuing dangers that face people. The content of the fear will depend upon the specific continuing circumstances or culture in which the individual finds himself. The factor would be measurable by different items for populations that have been subjected to different influences.

Tests with high loadings on this factor:

1. X:Wants America to have more protection from A-bomb.
   CaF-2 (Fe51,Ix37); CM-18 (Fe49,Ir28)
2. X:Wants country threatening America to be destroyed.
   CaF-9 (Fe49,?-33);CM-19 (Fe45,Sc?45,Ix-27,?26)
3. X:Wants to punish those responsible for inflation.
   CaF-23 (Fe44,Ix38,If-27)
4. X:Wants to avoid becoming insane.
   CaF-7 (Fe37,?29)
5. X:Wants danger of accidents and disease reduced.
   CM-20 (Fe35,Ix27,Ia?-27)

FACTOR G: Intelligence

Analyses: Ab2? CaB CaG DT? SB
BrA CaC CE Ho
BrB CaD Ch Mo?
CaA CaE? CSA? OF?

Combination of cognitive aptitude factors.

The symbol G is used advisedly for this factor in order to associate it with Spearman's factor. It represents a combination of the aptitude factors, *Verbal*, *Deductive Reasoning*, and probably others. It may also contain personality factors such as *Alertness*, which could easily affect both intelligence test scores and behavior ratings on intelligence. It is Cattell's *Factor B*, which he has wisely called *Intelligence in the Total Personality*.

Tests with high loadings on this factor:

1. T:Intelligence: ACE Psychological Exam.
   CaB-36 (G53,?29,?26); CaC-36 (G60); CaD-1 (G42+); CaG-8 (G84?-29);
   Mo-40 (G?43); SB-23 (G48,?-28)
2. R:Mental activity.
   Ho-4 (G92)
3. R:Intelligence.
   BrB-20 (G84); Ts-2 (?46,?53)
4. R:Quickness of intelligence.
   Ho-2 (G81)

FACTOR G (Continued)

5. R:Lack of credulity.
   BrB-26 (G80,A-27)
6. T:Academic end-of-course examination.
   Ho-15 (G73,Do?-25)
7. C:No unemployment.
   CE-3 (G67); Ey-3 (Pc-55,?36)
8. T:Score on Philadelphia Mental Ability Test.
   Kr-24 (G66,Ei?-29)
9. T:Otis: Similarities.
   BrA-35 (G65)
10. T:Otis: Directions.
    BrA-37 (G64)
11. C:Membership in political, social, cultural, industrial or other group.
    CE-8 (G64); Ey-8 (Pc-46,Su?-40,?32)
12. T:College average.
    SB-22 (G62)
13. J:Thurstone's Attitude Scale for pacifism.
    Ch-4 (G62); Fe-1 (Se59); Fe-2 (Se59)
14. C:Above average drive and energy.
    CE-14 (G61); Ey-14 (Su?69,Pc-53)
15. T:Chicago entrance psychological examination.
    Ch-1 (G59)
16. T:H.S. average.
    SB-21 (G58)
17. J:Thurstone's Attitude Scale for communism.
    Ch-2 (G53,Lc53)
18. R:Intelligent, analytical vs. unimaginative, stupid.
    CaA-2 (G52,Pe25)

FACTOR Gs: Gregariousness

Analyses:			
	BT	Du?	SaB?c
	CD	La	St1?
	CP?c	RTA?c	St2?

Desire to be with people or not to be alone.

Representing a passive desire to be among people, this factor is distinct from active sociability, Factor So, a distinction made clear only by Analysis La. The factor was named Interest in Male Association in Analysis CD, where female subjects were used. Following this suggestion, one might interpret the factor as Interest in Association with the Opposite Sex. There is no evidence to confirm or deny the separate existence of Factor Ix, Sex Interest, except possibly the confirmation supplied by the failure of CaF-14, Comradeship with students, to have a loading on Ix.

Tests with high loadings on this factor:

1. Q:Likes to be with other people a great deal.
   BT-25 (Gs90); La-24 (Gs76)
2. I:Low on Strong's Author scale.
   CD-1 (Gs84,I1-34,Iw28,Is27); CP-9 (?72,Is61); Sg-34(Il-71,Is-59);
   ThA-15 (I1-84,Iw-28,Ib-25)

FACTOR Gs (Continued)

3. I:Strong's Housewife scale.
   CD-17 (Gs83,Il-36)
4. Q:Cares much for parties or dances.
   CaE-19 (So-41,Pe?-26); La-12 (Gs82,Do26,So25); SaB-19 (Sf55,?-29)
5. I:Strong's Office Worker scale.
   CD-16 (Gs77,Il-57); CP-20 (?92,Is25),FH-10 (Il-78,Iw56); Sg-26 (Is-80,Il-33)
6. Q:Usually prefers to work with others.
   BT-21 (Gs71); GuA-14 (Ip-44); La-50 (Gs48,Ss-42); RTB-9 (So69,Cd-35, E29)
7. I:Low on Strong's Librarian scale.
   CD-2 (Gs74,Il-42)
8. I:Strong's Nurse scale.
   CD-14 (Gs72,Is29)
9. I:Strong's Secretary-Stenographer scale.
   Cd-15 (Gs71,Is-45,Il-42)
10. Q:Does not like to be by himself a great deal.
    La-21 (Gs70,So39,Sn-28)
11. Q:People are more stimulating to him than anything else.
    BT-18 (Gs59,Ss-27)

FACTOR Ho: Honesty

Analyses: BrA CW

Resistance to the temptation to cheat on a test.

Whether or not this reflects a general trait of honesty cannot be decided on the basis of the data. However, to name the factor Honesty, where honesty on tests is the only thing measured, is probably not inconsistent with liberties of naming taken elsewhere in this book and throughout the testing field.

Tests with high loadings on this factor:

1. Q:Low on MMPI Lie scale.
   Co-1 (Pc45,E-26); Abl-7 (?-28); Ab2-7 (?-55); CW-1 (Ho67,Su34,Sg26); WL1-1 (E-47); WL2-1 (E-35)
2. T:Coordination Test of Hartshorne and May. Low amount of peeping.
   BrA-2 (Ho63)
3. T:Maller Self-Marking Test. Low score on high ability questions.
   BrA-1 (Ho59)
4. T:False Book List. Low number of fictitious titles claimed as read.
   BrA-3 (Ho55,?27)
5. T:Overstatement Test. Small difference between statement of achievement and test score.
   BrA-4 (Ho53)
6. Q:Low on MMPI Paranoia scale.
   Co-8 (Pc-31); Abl-8 (Pc-32,E-32); Ab2-8 (?-56,?-50); CW-8 (Ho48,?-25); Ty-6 (?-56,?-43,Pc34); WL1-9 (Pc-63,?-59); WL2-9 (E-51,?-35)

FACTOR Hy: Hysteria

Analyses: Ey?c Wi
CE?c WM
WH

Presence or absence of conversion symptoms.

This factor has only been found for abnormal subjects, and could not be found otherwise, unless quite different variables are able to detect it. The identification as Factor E of factors containing the variable Hysteria MMPI may imply that this is a sub-factor of Factor E operating at the extreme unfavorable end of the scale. See Analysis Abl for another possible sub-factor of E at the unfavorable end of the scale.

Tests with high loadings on this factor:

1. C:No organic basis for complaints.
   Wi-25 (Hy63); WM-13 (Hy74,Ps25); WH-25 (Hy66) WB-13 (?-30,?26)
2. C:Organic pathology with emotional basis.
   Wi-29 (Hy61); WM-16 (Hy68); WH-29 (Hy68); WB-16 (?38)
3. C:Use made of physical disease symptoms.
   Wi-9 (Hy73); WM-5 (Hy50,Ps50); WH-9 (Hy58); WB-5 (--)
4. C: No concern over physical handicaps.
   Wi-42 (Hy62); WH-42 (Hy48)

FACTOR Ia: Interest in Athletics

Analyses: CaF GuB
CM? RTC

Interest in athletics as spectator or participator.

Separation, if any, between being spectator and participator may well have been missed because of the small number of variables that pertain to this factor. However, the appearance of this as a single factor indicates that the two factors, if they ever can be separated, will be highly correlated.

Tests with high loadings on this factor:

1. X:Likes to take active part in athletics and to get exercise.
   CaF-1 (Ia69); CM-8 (Ia?49,Fe-25)
2. X:Wants to attend football games and follow the fate of teams.
   CaF-22 (Ia42,?37); CM-9 (Ia?48)
3. Q:More interested in athletics than in intellectual things.
   BT-2 (Ip-47); CaE-37 (G?-38,Ne-27,?-26); GuA-19 (Ip-69,Mf41); GuB-13 (Rh40,Ia35,Ip-25); RTC-13 (Ia40); SaB-37 (Cu?-61,Ip-32,?32,?-30)
4. Q:Becomes absorbed watching athletic contest.
   RTC-28 (Ia44); GuB-28 (Rh27,Ia25)

FACTOR Ib: Interest in Business

Analyses: CM
Co
CP
Du
Lu
Sg?
ThA

Interest in financial and practical affairs vs. interest in the arts.

Cross-identification of this factor between Analysis Du and Lw is clear, and cross-identification between Analysis CP and ThA is good, but the identification of these two pairs with one another is very dubious and is made on psychological grounds only. Analysis FH should have thrown some light on this, but it did not. In naming this factor Lurie used the term Philistine which puts emphasis on lowness of aesthetic interests. His analysis shows low aesthetic interest with high economic and political interest as well as a separate factor that concerns aesthetic interest. This occurs even though his items do not force low scores in one interest when high scores are received in another as do the Allport Vernon variables used in Analysis Du. Strong's Artist scale has a negative loading on Factor Ib in Analysis ThA, but not in Analysis CP.

It is difficult to know whether or not all of this proves that persons interested in business tend to be disinterested in art, but the evidence seems to weigh in the direction that this is the case. The objection might be raised that subjects tend to differentiate their interests on an inventory, spuriously reducing some of their scores, because they want to indicate clear interest in something else. If this happened, there would be substantial negative correlations between interest inventory scales. That this is not the case is shown in published tables of intercorrelations and is demonstrated by the "inventory factors" of Analysis To. On the other hand the positiveness of the correlations may be produced by error variance on the items that overlap the various scales. Let's conclude tentatively, then, that negative factor loadings despite overlapping scales is satisfactory evidence that low interest in something is a real accompaniment of high interest in something else. See also Factor Is for a discussion of type of interest factors.

Tests with high loadings on this factor:

1. I:Strong's Certified Public Accountant scale.
   CP-4 (Ib65,Is-37); FH-9 (Iw53); Sg-24 (Ib?73,I140); ThA-3 (Ib56,I132)
2. I:Strong's Occupational Level scale.
   Co-19 (Ib76); Sg-36 (I178,Iw-39)
3. X:Wants reputation in his profession.
   CaF-28 (?32); CM-26 (Ib72,?29)
4. I:Allport-Vernon Political scale.
   Du-5 (Ib65,Is?-25); FH-5 (?72,Is-58,I1-26)
5. I:Allport-Vernon Economic scale.
   Du-2 (Ib64); FH-2 (I1-67,?-60)
6. IJ:Favors economic interests.
   Lu-5 (Ib59)
7. IJ:Favors political ideals.
   Lu-18 (Ib59)
8. X:Wants to be proficient in career.
   CaF-6 (?33); CM-29 (Ib59,?36,Sc?-29,Fe27)

FACTOR Ib (Continued)

9. I:Strong's Lawyer scale.
   CD-11 (Iw80 ,Gs-25); Cp-10 (?-61,Is-53,Ib42); FH-12 (Il77,Is-40); Sg-33(Il82,Ib?27); ThA-6 (Il77,Ib44)
10. X:Does not want to help the distressed.
    CM-4 (Ib51,Ia?51)
11. I:Low on Allport-Vernon Religious scale.
    Du-6 (Ib51,Is?48); FH-6 (Ir?-89)
12. IJ:Does not favor aesthetic interests.
    Lu-9 (Ie-64,Ib59)
13. X:Wants to increase his salary.
    CaF-18 (If42,?31,Ix-28); CM-28 (Ib47,Ia?-41,Ix-26)
14. I:Low on Allport-Vernon Aesthetic scale.
    Du-3 (Ib40); FH-3 (Ir?47,Il-38)

FACTOR Ic: Interest in Clerical Work

Analyses: Co To

Preference for occupations involving clerical and computational work.

Separation, if any, between clerical and computational interest may well have been missed because of the small number of variables that pertain to this factor, but it may be concluded that, if separated, these would be highly correlated factors. The factor is described above as interest in the occupation rather than interest in the work itself, because for this type of work, it is reasonable to assume that the interest is not in the specific activity but is in the working conditions and associations. See Factor Is for discussion of this point.

Tests with high loadings on this factor:

1. I:Lee and Thorpe Business scale.
   To-33 (Ic81,Iw?34,?27,?25)
2. I:Guilford Office Work Numerical scale.
   To-29 (Ic79,?28)
3. I:Kuder Clerical scale.
   Co-29 (Ic77,Mf-31)
4. I:Guilford Office Work Clerical scale.
   To-28 (Ic76,Iw?30,?30)
5. I:Texas Analyzer Business Detail scale.
   To-36 (Ic72,Iw?28)
6. I:Kuder Computational scale.
   Co-22 (Ic69)
7. I:Strong Business Detail scale.
   Co-15 (Ic67,Is-48)

FACTOR Ie: Interest in Aesthetics

Analyses: Lu To

Interest in the expression of and the appreciation of art.

Separation, if any, between expression and appreciation may well have been missed because of the small number of variables that pertain to this factor, but it may be concluded that, if separated, these would be highly correlated factors. Analysis Lu shows that there is also a tendency to be interested in art in inverse relation to interest in business. See Factor Ib. Factor Ie represents interest in art that is independent of the relationship with interest in business. See Factor Is for a discussion of types of interest factors.

Tests with high loadings on this factor:

1. I:Guilford's Artistic Expressive scale.
   To-13 (Ie86,?34)
2. I:Lee and Thorpe's Arts scale.
   To-34 (Ie84,?-34,?-31,?27,Is25)
3. I:Guilford's Artistic Appreciative scale.
   To-12 (Ie72,?42)
4. IJ:Favors aesthetic interests.
   Lu-9 (Ie64,Ib-59)
5. IJ:Favors aesthetic preferences.
   Lu-11 (Ib-47,Ie45)

FACTOR If: Interest in Family

Analyses: CaF CM

Interest in the welfare of one's family and in assuming the responsibilities of head of the family.

Welfare of parents as well as children is included. Variable 3 suggests independence from the parents. The two analyses present different views of this factor. In Analysis CaF married men are concerned with salary and welfare of country as these affect the family. In Analysis CM the college man yearns for the maturity and associations that bring a wife and family; these include movies, drinking, smoking, and romance.

Tests with high loadings on this factor:

1. X:Wants to keep parents comfortable.
   CaF-43 (If44,Ir44); CM-3 (If51)
2. X:Wants to insure best education for his children.
   CaF-50 (If48); CM-2 (If40,?-40)
3. X:Does not want parent's advice.
   CaF-5 (Ir-41,?-36,If34); CM-12 (Ir-47,If44,Ib25)
4. X:Wants to help children all over the world.
   CaF-46 (If 42)
5. X:Finds America congenial.
   CaF-42 (If53); CM-1 (Ir-31,Fe29,If--)
6. X:Likes to go to movie or play.
   CaF-30 (Ix54,?37,If--); CM-5 (If50,Cv-35,Ia?32)
7. X:Wants to be able to spend more on drinks and smokes.
   CaF-49 (?56,If--); CM-21 (If52,Ix36)
8. X:Wants to make love to a beautiful woman.
   CaF-31 (Ix41,If--); CM-6 (If45,Ix42,?-32)
9. X:Wants to increase his salary.
   CaF-18 (If 42,?31,Ix-28); CM-28 (Ib47,Ia?-41,Ix-26,If--)

FACTOR Il: Interest in Linguistic Activities

Analyses: CD Sg
FH ThA

Interest in activities where success depends on ability at verbal persuasion vs. interest in other activities.

On the positive side this factor is characterized by the interests of advertising men, authors, and lawyers. It is not clear why Strong's Artist scale should have a positive loading. Possibly the artist's job is to communicate to others through a medium that is not as psychologically distinct from language as we tend to think. On the negative side are a variety of occupational interests including manual, scientific, clerical, and business. It is suggested that a real decrease in these interests accompanies high interest in linguistic activities. See Factor Ib for a discussion of this. See also Factor Is for discussion of types of interest factors.

Tests with high loadings on this factor:

1. I:Strong's Advertising Man scale.
   CP-1 (Is-71,?-60); Sg-32 (Il85,?28); ThA-1 (Il66,Is-48)
2. I:Strong's Author, Author-Journalist, or Journalist scale.
   CD-1 (Gs-84,Il34,Iw-28,Is-27); CP-9 (?-72,Is-61); Sg-34 (Il71,Is59); ThA-15 (Il84,Iw-28,Ib25)
3. I:Strong's Lawyer scale.
   CD-11 (Iw80,Gs-25,Il--); CP-10 (?-61,Is-53,Ib42); FH-12 (Il77,Is-40); Sg-33 (Il82,Ib?27); ThA-6 (Il77,Ib44)
4. I:Strong's Occupational Level scale.
   Co-19 (Ib76); Sg-36 (Il78,Iw-39)
5. I:Low on Strong's Carpenter scale.
   Sg-12 (Il88,Is-27)
6. I:Strong's English Teacher scale.
   CD-8 (Il76,Iw38,Is-35)
7. I:Low on Strong's Math.-Science Teacher scale.
   Sg-14 (Il85,Iw-34)
8. I:Low on Strong's Office Worker scale.
   CD-16 (Gs-77,Il57); CP-20 (?-92,Is-25); FH-10 (Il78,Iw-56); Sg-26 (Is80,Il33)
9. I:Low on Strong's Policeman scale.
   Sg-15 (Il83)
10. J:Low on Allport-Vernon Economic scale.
    Du-2 (Ib-64); FH-2 (Il67,?60)
11. I:Low on Strong's Farmer scale.
    CP-8 (Is-64,?32,Ib28); Sg-11 (Il76,Ib?40,?34,Is-26); ThA-13 (Is-71,Il54)
12. I:Strong's Artist scale.
    CD-3 (Gs-62,Iw-61,Il37); CP-3 (?-87); Sg-1 (Is90,Il34); ThA-2 (Il70, Is45,Ib-31)
13. I:Low on Strong's Printer scale.
    Sg-13 (Il73,Iw-32,Is-29)
14. I:Low on Strong's Masculinity scale.
    CD-18 (Is-35,Il30);Co-20 (Mf69); Sg-37 (Il73,Iw47)
15. I:Low on Strong's Purchasing Agent scale.
    CP-15 (Ip?69,Ib-30); Sg-27 (Iw61,Is60,Il24); ThA-14 (Il79,Ib-44)

FACTOR Ip: Interest in Philosophizing

Analyses: BT RTC
CP? SaB
GuA ThB?
GuB

Interest in the contemplation and discussion of the serious happenings and problems of life.

This appears to be a factor with some broad effects on interest and habits of participation in social and intellectual activities. It has some behavioristic resemblance to introversion, but there is no evidence of maladjustment, and there is evidence for a positive attitude toward social intercourse: variables 1, 6, 7, and 10 below. The thinking or discussion is stimulated by interest in the solution of philosophically important problems. Compare with Factor Iz.

Tests with high loadings on this factor:

1. Q:Interested in serious problems of life and long discussions.
   CaE-36 (?-28,Re-26,?25); SaB-36 (Ip88,?28)
2. Q:Inclined to analyze the motives of others.
   BT-5 (Ip40,SJ-35,Ss27); CaE-35 (Is-31,Re-30,Sf?25); GuA-12 (Ip42); GuB-7 (Ip48,Cd?33); RTC-7 (Iz46,Ip38); SaB-35 (Do52,Sc-37,Au29)
3. Q:Inclined to be introspective.
   GuB-26 (Ip57,Cd?41), RTC-26 (Ip50, Iz50)
4. Q:More interested in intellectual things than in athletics.
   BT-2 (Ip47); CaE-37 (G38,Ne27,?26); GuA-19 (Ip69,Mf-41); GuB-13 (Rh-40,Ia-35,Ip25); RTC-13 (Ia-40,Ip--); SaB-37 (Cu?61,Ip32,?-32,?30)
5. Q:Frequently finds self in a meditative state.
   GuB-16 (Cd?57,Ip47); RTC-16 (Ip49,Iz41,So-26)
6. I:Advertising man, lawyer or waiter are more congenial occupations than carpenter, aviator, or real estate salesman.
   CaE-56 (Pe?-35,Is-27,Re-27); SaB-56 (Ip55,Cv-43)
7. Q:Likes to discuss more serious questions of life with friends.
   RTC-22 (Ip40); GuB-22 (Ip39)
8. I:Prefers a friend who is interested in thinking about attitude toward life vs. one who is efficient or practical.
   CaE-63 (?28,Re-26); SaB-63 (Ip53)
9. Q:Does not want someone with him when receiving bad news.
   BT-10 (Ip52,Ss43)
10. Q:Prefers to take the lead in group activities.
    GuA-3 (Ip50,So50,Mf29)

FACTOR Ir: Interest in Religion

Analyses: CaF Lu
CM SaB
FH?

Interest in the spiritual values and ideals of religion as they satisfy the individual's need for security or other personal needs.

FACTOR Ir (Continued)

This factor is contrasted to Factor Jr, Attitude toward Religion, by Analysis SaB. Although both pertain to religion, the two factors are quite different. Factor Ir pertains to religion as it fills the individual's need for the feeling of security that proceeds from faith in a divine power.

Tests with high loadings on this factor:

1. X:Wants to feel in touch with God or a principle giving help.
   CaF-44(Ir67); CM-11(Ir53, Ix-29, Cv-28)
2. IJ:Favors religious ideals.
   Lu-22(Ir69,?-32)
3. J:Not annoyed by unintentionally disagreeable acts.
   CaE-79(?-69,Pe?52,?-40,?37); SaB-79(Ir63,Re-36,Cv26)
4. I:Church should convey spiritual worship vs. bring out morality and charity.
   CaE-54(?46,Ss34,Ne-33,Re30,?28,?-27,?26); SaB-54(Ir62,Ne-50)
5. X:Wants parents' advice and to heed their wishes.
   CaF-5(Ir41,?36,If-34); CM-12(Ir47,If-44,Ib-25)
6. I:Would prefer lecture on religious faiths vs. government.
   CaE-60(G?-36,?-35,?-35,Se?25); SaB-60(Ir56,Re34)
7. X:Wants to see organized religion maintain or increase its influence.
   CaF-19(Ir62); CM-14(If-37,?32,Ir26)
8. I:Prefers spouse to be spiritual or artistic vs. successful or admirable.
   CaE-59(Ss30,?-30,?28); SaB-59(Ir52,Ip47)
9. IJ:Does not favor economic beliefs.
   Lu-8(Ir47,?-42,Ib-35)
10. I:Prefers article on protestant leaders vs. market conditions.
    CaE-53(Se?59,G?-54,?-45); SaB-53(Ir44,Ss27,?44)
11. IJ:Favors religious preferences.
    Lu-23(Ir43,?-32)

FACTOR Is: Interest in Science

Analyses: CaE
Co
CP
Du?
FH
Lu
SaB?c
Sg
ThA
To

Interest in scientific or related fields vs. interest in business.

Physical science, medicine, psychology, architecture, and engineering are included on the positive side of the factor with some business variables on the negative side. See Factor Ib for a discussion of the negative side of an interest factor.

In all of these interest factors there arises the problem of whether there exists interest in a subject matter or interest in some other aspect of an occupation. If occupations with high loadings are distinguishable from those with low loadings, primarily because they deal with different subject matter, it is reasonable to say that interest is in the subject

FACTOR Is (Continued)

matter. On the other hand, if occupations with high loadings are distinguishable primarily because of the nature of the working conditions, personal associations, or other characteristics of the occupations, it is reasonable to say that the interest is not in the subject matter, but in whatever is common to the occupations with high loadings. For Business, Philosophizing and Science, the interest seems to be in the subject matter; for Family, Religion, Sex and Social Welfare, it seems to be in a goal; for Athletics, Aesthetics, Linguistic Activity, and Puzzles, it seems to be in the activity itself; for Clerical Work, it is probably satisfaction with the occupation as one providing the most satisfactory working conditions and the least unpleasant work.

Where interest scales are developed by try-out with a group of persons of a given occupation, the scale represents interests characteristic of persons within the occupation rather than interest in some aspect of the occupation. It will be assumed, however, that the interests which distinguish an occupational group reflect an interest in some aspect of the occupation itself.

Tests with high loadings on this factor:

1. I:Strong's Chemist scale.
   CP-5(Is87,?-30); FH-14(Is95);Sg-9(Is75,Il-54,Ib?26); ThA-4(Is98)
2. I:Low on Strong's L.I. Salesman scale.
   CD-6(Il42,Iw-29,Is27,Gs26); CP-11(Is79,?-32,Ib-29); FH-8(Is93,Ir?-28); Sg-31(Il-67,Is53,?-38); ThA-10(Is82,Ib-45,Iw-27)
3. I:Strong's Physician scale
   CD-4(Is70,Gs-55); CP-6(?-86,Is--); FH-11(Is65,Il51,Iw-40); Sg-4(Is91); ThA-18(Is71,Il33,Iw-26)
4. I:Strong's Psychologist scale.
   CP-14(Is72,Ip?45,?-39); Sg-2(Is77,Iw38,Ib?33); ThA-8(Is77,Il47,Ib-28)
5. I:Strong's Architecture scale.
   CP-2(?64,Is52); Sg-3(Is92); ThA-11(Is83,Il26)
6. I:Low on Strong's R.E. Salesman scale.
   CP-16(Is79,?30,Ip?25); Sg-30(Il-61,Is55,Ib?28,Iw25); ThA-17(Is76, Ib-58)
7. I:Strong's Engineering scale.
   CP-7(Is67,?-67,Ip?-35); Sg-8(Il-60,Is58,Iw-46); ThA-5(Is84,Il-36)
8. I:Strong's Dentist scale.
   CD-5(Is68,Iw-46,Gs28); Sg-5(Is81,Il-33)
9. I:Guilford, Scientific Theoretical scale.
   To-17(Is86)
10. IJ:Favors theoretical ideals.
    Lu-2(Is80)
11. I:Guilford, Scientific Investigatory scale.
    To-16(Is80)
12. IJ:Favors theoretical interests.
    Lu-1(Is77,?52)
13. I:Low on Strong's Business Contact scale.
    Co-16(Is77,Ib-38,Mf30)
14. I:Low on Kuder's Persuasive scale.
    Co-24(Is74)
15. I:Architect and chemist are more congenial occupations than office manager and banker.
    CaE-52(Is75,?-38);SaB-52(?61)

FACTOR Is (Continued)

16. J:Allport-Vernon Theoretic scale.
    Du-1(Is?55,Gs?-38); FH-1(Is59,Il35)
17. IJ:Favors theoretical preferences in people.
    Lu-3(Is72)
18. I:Strong's Technical scale.
    Co-13(Is67,Mf44)
19. I:Artist and Physicist are more congenial occupations than YMCA secretary and vacuum cleaner salesman.
    CaE-47(Is66); SaB-47(?61)
20. I:Brainard, Scientific scale.
    To-48(Is66,?38,Ic26,?-25)
21. I:Lee and Thorpe, Sciences scale.
    To-35(Is65,?31,?29,?26)

FACTOR Iw: Interest in Social Welfare

Analyses: CD FH ThA
Co Lu To?
CP?c Sg

Interest in contributing to the happiness of others.

This factor combines a considerable variety of occupations and scales the common element of which is the goal of helping others. Ordinarily this book considers Strong's scales for men and women to be parallel where the scales have the same name. However, Strong's Lawyer scale is included in the list below (variable 5) even though it appears on this factor only in Analysis CD where the subjects were women. The implication is that Interest in Social Welfare motivates lady lawyers while Interest in Linguistic Activity motivates men lawyers. See also Factor Is for discussion of types of interest factors.

Tests with high loadings on this factor:

1. I:Strong's Y.M.C.A. Secretary scale.
   CD-12(Iw78); CP-19(?92,Ip?30); FH-13(Iw79); Sg-19(Iw71,Is-53); ThA-12(Iw90,Ib-37)
2. I:Strong's Social Science Teacher scale.
   CD-10(Iw78,Gs38,Il32); Sg-20(Iw76,Is-58)
3. I:Strong's Minister scale.
   CP-12(?80,Ip?42); Sg-22(Iw87); ThA-7(Iw62,Il51,Ib-30)
4. I:Strong's Teacher scale.
   CD-9(Il67,Iw50); FH-7(Iw76,Is38); ThA-9(Iw68,Is36)
5. I:Strong's Lawyer scale.
   Women:CD-11(Iw80,Gs-25). Men:CP-10(?-61,Is-53,Ib42); FH-12(Il77, Is-40,Iw--); Sg-33(Il82,Ib?27,Iw--); ThA-6(Il77,Ib44,Iw--)
6. I:Strong's Interest Maturity scale.
   Co-18(Iw68)
7. IJ:Favors social interests.
   Lu-13(Iw60,?44,Is-30)
8. I:Strong's Social Welfare scale.
   Co-14(Iw60,Ic-30,Mf-28,Ib-26)
9. I:Strong's Personnel Manager scale.
   CP-13(?83,Is37); Sg-18(Is-48,?48,Ib?38,Iw32); ThA-16(Iw66,Is-30, Il-26)

FACTOR Iw (Continued)

10. I:Low on Kuder Artistic scale.
    Co-25(Iw52,Ic32,Ib29)
11. IJ:Favors aesthetic ideals.
    Lu-10(Iw51)
12. IJ:Favors social ideals.
    Lu-14(Iw49,?39)

FACTOR Ix: Interest in Sex

Analyses: BC
CaF
CM

Need for satisfaction of the sexual drive.

All subjects in these analyses were men; those of Analyses BC and CM were in college, those of Analysis CaF were married or engaged.

Tests with high loadings on this factor:

1. Q:Questionnaire on sex predation.
   BC-11(Ix52,Do29)
2. X:Wants to make love to beautiful woman.
   CaF-31(Ix41); CM-6(If45,Ix42,?-32)
3. Q:Questionnaire on anti-feminine feelings (woman's place is in home).
   BC-22(Ix50,?34,?30,Do26)
4. X:Likes sex appeal in a woman.
   CM-7(Ix49,?-42,Ib-27)
5. Q:Questionnaire on sex drive.
   BC-21(Ix45,Do29,?-26)
6. X:Wants more attractive restaurants around town.
   CaF-24(Ix34,?29)
7. X:Wants to travel to unknown corners of the earth.
   CaF-32(Ix33)
8. I:Likes to go to good movie or play every week or so.
   CaF-30(Ix54,?37); CM-5(If50, Cv35,Ia?32,Ix--)

FACTOR Iz: Interest in Puzzles

Analyses: GuB
RTC

Liking for thinking out problems for its own sake.

This was called Liking Thinking by Guilford. Interest here is in the puzzles as a game where the ability to think is challenging or competitive. In both analyses listed it may be compared with Factor Ip, Interest in Philosophizing. (It should be remembered here that Analyses GuB and RTC are merely different rotations of the same data.)

FACTOR Iz (Continued)

Tests with high loadings on this factor:

1. Q:Enjoys thinking out complicated problems.
   GuB-25(Iz64,Ip29); RTC-25(Iz60,Mp-43)
2. Q:Likes to try wits in solving puzzles.
   GuB-23(Iz61); RTC-23(Iz31,Mp-29,?27)

FACTOR Lo: Loneliness

Analyses: CaE?c
Mo
SaB?c

Tendency to feel lonely even with other people.

Only in Analysis Mo was this factor found separately from Factor Cd, Cycloid Tendency. The figure shows the plot of Factors Lo and Cd in Analysis Mo. The trait, Depression, appears as a combination of these two factors. It seems likely, however, that there are other types of depression than the one stemming from this particular combination.

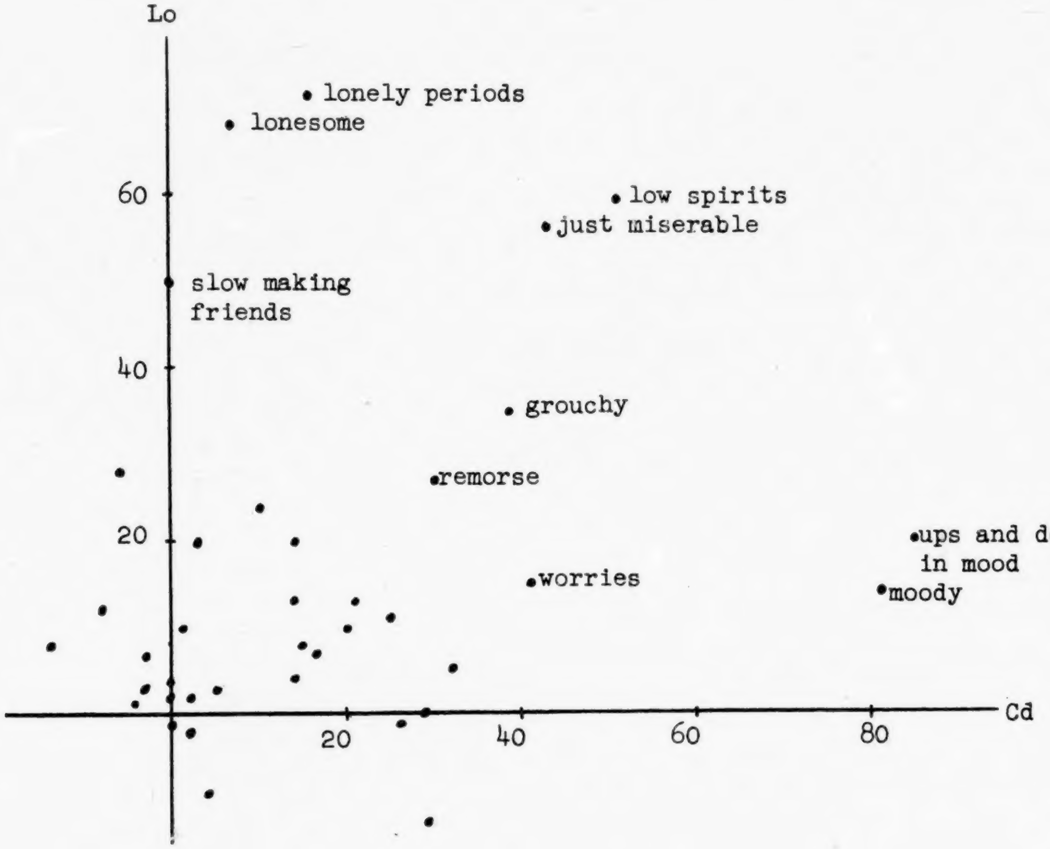

Figure. Plot of Factors Lo and Cd for Analysis Mo.

FACTOR *Lo* (Continued)

Tests with high loadings on this factor:

1. Q:Often experiences periods of loneliness.
   Mo-30(Lo71,Au49)
2. Q:Often feels lonesome with people.
   BT-12(Au48,Gs-44); CaE-8(?76); CSA-17(?61); Mo-4(Lo68,Au47); SaB-8(?60,Ip36,Au26,?26)
3. Q:Frequently in low spirits.
   Mo-29(Lo59,Cd51)

FACTOR *Ma*: Mania

Analyses: WB?c
WH
Wi
WM

Exaggerated activity and emotions.

This factor has been identified only with abnormal subjects. It coincides probably with the manic phase of manic-depressive psychosis. It may represent merely an abnormal extension of *Factor Su*, *Surgency*.

Tests with high loadings on this factor:

1. C:All overt activity is not at a minimum.
   WB-17(?29,?-26); WH-32(Ma50,?-34); Wi-32(Ma74); WM-17(Ma59)
2. C:Does not avoid people.
   WB-7(?54); WH-13(Ma50,?-31,Ax-30); Wi-13(Ma54,Hy25); WM-7(Ma67,Ax-26)
3. C:Does not give in easily to others.
   WB-3(?46); WH-6(Ma43); Wi-6(Ma59), WM-3(Ma58,Hy-37)
4. C:Temper tantrums.
   WB-6(?70); WH-12(Ma60,?27,Ps26); Wi-12(Ma56); WM-6(?54,Ma45,Ps41)
5. C:Shouts, sings, talks loudly.
   WB-8(?68), WH-14(Ma69,?33,?25); Wi-14(Ma46,Ex33, Dt26); WM-8(?64, Ma39,Ps34)
6. C:Can make decisions.
   WH-43(?-53,Ma40,?-25); Wi-43(Ma68)
7. C:No failures of affective response.
   WH-41(Ma43,?-33,?-29); Wi-41(Ma61,Dt-28)
8. C:Dramatically attention demanding.
   WH-31(Ma49), Wi-31(Ma54,?46,Hy25)
9. C:Exaggeration of ability and well-being.
   WH-20(Ma61,?36); Wi-20(?37,Ma36)
10. C:Exaggerated affective expressions.
    WH-54(Ma60,?27); Wi-54(Ps32,Hy31,Ma26,Dt26)

FACTOR Me: Meticulousness

Analyses: BC
Bo

Tendency toward excessive carefulness with details.

It is possible that this is the same factor as Factor C, Carefulness, described in *Psychometric Monograph, No. 5*, as the tendency not to make errors on speeded tests where the individual items are of trivial difficulty.

Tests with high loadings on this factor:

1. Q:Orderliness questionnaire.
   BC-23(Me73,Ei?29)
2. Q:Meticulousness questionnaire.
   BC-14(Me61,De?-29)
3. R:Personal appearance.
   Bo-2(Me57,J?38,?34,A26)
4. R:Thoroughness.
   Bo-4(De57,Me50,?39)

FACTOR Mf: Masculinity vs. Femininity

Analyses: CaE?
Co
CSA
CW
FT1
FT2
Gi?c
GuA
Ko
ThB?
Ty

Masculine vs. feminine interests, preferences, and behavior patterns.

Since there are differences between men and women in a tremendous variety of activities, it should be clear that the list below by no means represents the most important differences that exist. Many of the items in the list are ones that are found in other factors. It can be considered that this factor represents variance caused by the biological and environmental differences between the sexes, and that the other factors represented in this list reflect the variance that exists within sex. Such factors, of course, must correlate to some degree with Factor Mf. In studying the nature of this factor, it should be noted that, in 5 out of 8 of the analyses where the factor was identified with confidence, the identification was primarily based upon the "Masculinity-Femininity" scale of a published instrument. In none of these 5 cases was sex itself a variable.

Tests with high loadings on this factor:

1. C:Male sex.
   CaE-80(?34,?-30); CaG-39(Mf?51,?-25); CSA-47(Mf114,Se?-27,G?-25); Gi-17(?62); GuA-36(Mf83); Ko-38(Mf58,?-33); SaB-80(?57,Se-37,Ne-25)
2. I:Kuder's Masculinity-Femininity scale.
   Co-30(Mf82,?41)
3. R:Boorish, Clumsy,Awkward, Practical, Logical.
   CSA-14(Mf82,Pe?-50,E?39)

FACTOR Mf (Continued)

4. I:Activity preference (Terman-Miles, M-F).
   FT1-10(Mf70); FT2-10(Mf60,?30)
5. R:Clumsy, Awkward, Attentive to People, Lacking Artistic Feeling.
   CSA-16(Mf72,Pe?-39,?-38,Do?-35,Se?-34)
6. I:Books (Terman-Miles, M-F).
   FT1-9(Mf60); FT2-9(Mf50)
7. I:Strong's Masculinity-Femininity scale.
   CD-18(Is35,Il-30); Co-20(Mf69); Sg-37(Il-73,Iw-47); To-1(?51,Iw?-33, Ie-32,?28)
8. I:Kuder's Mechanical scale.
   Co-21(Mf68,Iw-36,Ib-33)
9. I:Interests (Terman-Miles, M-F).
   FT1-8(Mf60); FT2-8(Mf40,?40)
10. C:Acting silly and swaggering (nursery school children).
    Ko-15(Mf64)
11. C:High skin resistance (nursery school children).
    Ko-32(Mf58,?39)
12. Q:Low (Masculine) on MMPI Masculinity-Femininity scale.
    Co-7(?-33,Pc-28,Mf--); Ab1-13(Pc-33,E?-33); Ab2-13(?-58); CW-7(Mf39, Ho38,?-33); Ty-5(Mf55,?-35); WL1-8(Pc-38);WL2-8(?-54,Pc-36)
13. Q:Not frequently somewhat absent minded.
    GuA-16(Mf47)
14. C:Nervous habit of playing with genitals (nursery school children).
    Ko-1(Mf47,?-30)
15. Q:Likes to sell things.
    GuA-34(Mf44,So29)
16. C:Low on nervous habit of playing with hair (nursery school children).
    Ko-4(?53,Mf43)
17. T:Mechanical Aptitude test.
    CW-15(ME43,Mf41,Su34)

FACTOR Mp: Impulsiveness

Analyses: GuB
La
RTC

Tendency to act before adequate consideration of the action can be made.

In Analyses RTC and GuB (analyses using the same data) the variables with highest loadings on this factor are also heavily loaded with Factor Rh, Rhathymia. An oblique rotation (unpublished) made by D. R. Saunders of the data of Analysis GuB shows a correlation between the reference vectors for Factors Rh and Mp of -.51 which indicates the highest correlation he found between any two of the factors in that study.

Tests with high loadings on this factor:

1. Q:Does not usually plan out work carefully before beginning it.
   La-3(Mp58)
2. Q:Not inclined to stop and think before acting.
   GuB-20(Rh55,Mp35); GuC-8(Su36,Pe-34); RTC-20(Mp46,Ip-42,?34,Rh30); RTD-8(Su34,Rh32)

FACTOR Mp (Continued)

3. Q:Rates self as impulsive.
   GuB-14(Rh47,Mp38,So28); RTC-14(Mp40,Rh33,Ip-29)
4. Q:Often says things on the spur of the moment and then regrets it.
   La-4(Mp48,Cd25)

FACTOR Ne: Nervousness

Analyses: CaE La
FK? RTD
GuC SaB

Emotional hyper-sensitivity to exciting, distracting, or sudden stimuli.

This characteristic is coloquially called jumpiness or touchiness. It is distinguished from Factor E in that it pertains to extent of emotional reaction to a stimulus rather than to the general level of emotionality. It is not concerned with reaction to frustration as is Factor Ei.

Tests with high loadings on this factor:

1. Q:Rattled easily in exciting situations.
   CaE-5(Ne48); GuA-35(Cd39,Mf-38); La-33(Ne59,Sn33,Sc-30,Cd26); SaB-5(Ne50,E44,Sc-25)
2. Q:Does not keep emotions under good control.
   CaE-23(Ne52,?31,?-30); SaB-23(Ne47,?44)
3. Q:Easily startled by unexpected stimuli.
   CaE-30(?-35,Ne--); GuC-7(Ne51); RTD-7(Ne41,E?28); SaB-30(Ne52,Au37)
4. Q:Easily disturbed by distracting stimuli while doing mental work.
   GuC-4(Ne57,Pe-25); RTD-4(Rh-38,E?31,Ne28)
5. Q:Bothered by having an unfinished job on his hands.
   La-41(Ne55)
6. Q:Often in a state of excitement.
   La-32(Ne55,E40,Sn25); Mo-23(E42,Au34,Cd29)
7. Q:Draws or writes notes at a lecture.
   RTD-14(Ne36,Pe-28); GuC-14(Ne42)
8. Q:Has "nervous habits" like chewing pencil or biting nails.
   RTD-9(Ne35,Pe-27); GuC-9(Ne42,?28)

FACTOR Pc: Psychotic Tendency

Analyses: Abl Co Ty
Ab2?c CW?c WL1
CaE? Ey WL2
CE LW?

Combination factor of tendency toward mental disturbance of the schizophrenic, manic-depressive, and perhaps, other types.

This factor has been identified in both normal and abnormal groups. It may be a combination of factors such as Ax, Dt, Hy, Ma, and Ps. Although many of these may be relatively independent in a group of abnormal subjects, the correlation between them becomes substantial when the group is sufficiently heterogeneous. Furthermore, when an analysis includes only a few variables concerned with seriously abnormal reactions, there is no opportunity for the other factors to separate.

Tests with high loadings on this factor:

1. Q:MMPI Psychasthenic scale.
   Co-9(Pc76); Ab1-15(Pc81); Ab2-15(?77,?45); CW-9(?72,Mf-47); Ty-7(Pc70,?45); WL1-10(Pc94); WL2(Pc91)
2. Q:MMPI Schizophrenic scale.
   Co-10(Pc83); Ab1-16(Pc85); Ab2-16(?78,?52); CW-10(?93); Ty-8(Pc42,?36): WL1-11(Pc92); WL2-11(Pc94)
3. C:Badly organized personality.
   CE-12(Pc75,G-33); Ey-12(Pc92,E-35)
4. Q:MMPI Social Introversion scale.
   Ty-10(Pc85,?-33)
5. Q:Low on MMPI Correction (K) scale.
   WL1-2(Pc70); WL2-2(Pc63,E-58)
6. Q:MMPI Psychopathic Deviate scale.
   Co-6(Pc51); Ab1-12(Pc50); Ab2-12(?64,?32); CW-6(Su-38,?33); Ty-4(?58,Pc--); WL1-7(Pc70); WL2-7(Pc56,E42)
7. C:Abnormal before illness.
   CE-11(Pc68); Ey-11(Pc61,?33)
8. C:Weak, dependent, timorous personality.
   CE-13(Pc54); Ey-13(Pc65)
9. C:Abnormality in parents or siblings.
   CE-5(Pc66); Ey-5(Pc47,E-35,?31)
10. C:Schizoid and seclusive.
    CE-16(Pc58); Ey-16(Pc52,?29,E-26)
11. Q:MMPI Prejudice scale.
    Ty-12(Pc70,?-30,?-28)
12. C:Cyclothymic: depressive or hypomanic
    CE-15(Pc62,E34); Ey-15(Pc46,?37,?31)
13. T:Low on Thurstone's PMA Reasoning.
    Ab1-5(Pc68); Ab2-5(G?53,?43)
14. Q:Bell Emotional scale.
    Co-34(Pc67), MD-11(E74,So?31)

FACTOR Pe: Persistence

Analyses: BaB
BrA
CaA
CaB
CaC
CaD?
CSA?
GuC
Ho?c
Kr?
La
RTA
RTD
SaB
Stl?
Ts?

Willingness and ability to stick at a task or a type of work.

Most of the variables make no distinction between the various possible reasons for not sticking to a task, and so the universality of this factor is not adequately proven. The few exceptions to this are no. 4 in the list below

FACTOR Pe (Continued)

where obstacles are mentioned and nos. 11, 15, 17, and 18 where specific tasks were set up in test situations. Variables 1 and 2 might imply that not wanting to change tasks is prompted by inability to shift set, but the other variables on the factor are such as to indicate that these two were interpreted by most subjects as not wanting to change tasks because of restlessness. In the case of most factors, cross identification between analyses using different media is done merely on psychological grounds. This factor, however, presents a good example of where one analysis (SaB) served well in linking the media R and Q. Of pertinence here are Analyses Re[1] and TG[2] of Psychometric Monograph, No. 5, where sticking to two different verbal tasks and some perseverational effects fell on a factor identified as Pe. It seems reasonable to believe that this is the same Factor Pe. It is Cattell's Factor G.

Tests with high loadings on this factor:

1. Q:Does not like work where task is changed frequently.
   GuC-13(Pe81); RTD-13(Pe72)
2. Q:Does not like to change from one type of work to another frequently.
   GuA-11(--); GuC-3(Pe80); RTD-3(Pe73)
3. R:Persevering, determined vs. quitting, fickle.
   CaB-17(Pe55,Do?31); CaC-17(Pe57,G26,A25); SaB-97(Pe54+)
4. R:Does not abandon tasks in face of obstacles.
   RTA-18(Pe79)
5. Q:Does not prefer a job that offers constant change, travel, and variety.
   CaE-28(Pe?49,?29); SaB-28(Pe64,Re-31)
6. R:Does not abandon tasks from mere changeability.
   RTA-19(Pe71)
7. R:Does not tend to oscillate between cheerfulness and depression.
   RTA-2(Pe71)
8. R:Responsible vs. frivolous.
   CaB-6(Pe39,So?-31,?-30); CaC-6(Pe48); SaB-86(Pe44+,E-22)
9. Q:Does not have a craving for excitement.
   CaE-27(Pe?48,Se?33); SaB-27(Pe53,Su-34)
10. R:Insistently orderly vs. relaxed, indolent.
    CaB-20(G45,Pe28); CaC-20(Pe47); SaB-100(Pe45+)
11. T:Picture inhibition persistence.
    BrA-9(Pe58)
12. Q:Interests do not change rapidly.
    La-39(Pe58,Cd30); Mo-15(Cd29)
13. Q:Is not described as happy-go-lucky, carefree, nonchalant.
    CaE-26(?-34,Pe?33,?29,Sf?25); SaB-26(Pe60,Su-26)
14. R:Not impulsive.
    BaB-12(Pe56,?56,So28); BrB-32(Ei50)
15. T:Persistence adding.
    BrA-6(Pe53,Wi29)
16. Q:Above average in perseverance, tendency to persist.
    CaE-22(Ss29,?26); SaB-22(Pe53)

---

[1] Rethlingshafer, D. The relation of tests of persistence to other measures of continuance of action. J. abn. soc. Psychol., 1942, 37, 71-82.

[2] Thornton, G R. A factor analysis of tests designed to measure persistence. Psychol. Monog., 1939, 51, No. 229, 42 pp.

17. T:Non-variability in adding.
    BrA-12(Pe52)
18. T:Picture inhibition test.
    BrA-8(Pe50)
19. R:Emotionally stable vs. changeable.
    CaB-2(Pe44,Do?25); CaC-2(E-46,Pe--); SaB-82(Pe33+,E-29+)
20. R:Steady worker.
    BaB-20(Pe47)
21. R:Persevering.
    BaB-14(Pe45); Ho-6(G67,?45)

FACTOR Ps: Paranoid Schizophrenia

Analyses: WB
WH
Wi
WM

Degree to which subject is separated from reality by delusions, including delusions of persecution.

This factor has been found only with abnormal subjects. Factor VI in Analysis WH and Factor VII in Analysis Wi may represent a less severe variant of this factor.

Tests with high loadings on this factor:

1. C:Believes others influence him.
   WB-15(Ps57); WH-27(Ps64); Wi-27(Ps64,?30); WM-15(Ps76)
2. C:Thinking clearly delusional.
   WB-12(Ps54,Ax26); WH-24(Ps55,?32); Wi-24(Ps62,Ex33,?25); WM-12(Ps49, Hy-30,?25)
3. C:Feels systematically persecuted.
   WB-14(Ps72); WH-26(Ps64); Wi-26(?44,Ps36,Ma30); WM-14(Ps66)
4. C:Hallucinations.
   WH-45(Ps49,?25); Wi-45(Ps34,Ex33)
5. C:Opinions exceptional to physical laws.
   WH-44(Ps43,Ma38,?26); Wi-44(Ma56,?29,Ps26)

FACTOR Re: Religious Attitude

Analyses: CaE
Ch
Fe
SaB

Attitude that the conventional doctrines of the church are correct and should be supported.

The attitude here may stem from a need for the emotional stability or status provided by allegiance to a permanent and highly valued institution. Compare with Factor Ir.

FACTOR Re (Continued)

Tests with high loadings on this factor:

1. I:Would give to church vs. industry, science, or hospital.
   CaE-62(Re45); SaB-62(Re76)
2. J:Believes church vs. science concerning evolution.
   CaE-66(Re62); SaB-66(Re47,E25)
3. J:Low on Thurstone's Attitude Scale for Evolution.
   Fe-9(Re72); Fe-10(Re77)
4. J:Agrees with Sunday observance and discipline in education vs. easy divorce and more government regulation.
   CaE-64(Re52,?44,?36); SaB-64(Re44,E33,Do-27)
5. J:Thurstone's Attitude Scale for God.
   Ch-3(Lc-42,Re35,G-29); Fe-3(Re69); Fe-4(Re70)
6. J:Low on Thurstone's Attitude Scale for Birth Control.
   Ch-5(Re34, G-33); Fe-11(Re49); Fe-12(Re49)

FACTOR Rh: Rhathymia

Analyses: DT?
GuB
No?c
RTC
RTD

Uninhibited in decision and action.

Guilford describes this factor as freedom from care, lack of serious mindedness, impulsiveness, not the opposite of depression.

Tests with high loadings on this factor:

1. Q:Rates self as happy-go-lucky.
   GuC-15(Su40,?35,Ne-33); GuB-24(Rh76,Cd?-30); RTC-24(Rh81); RTD-15(Rh66)
2. Q:Ordinarily carefree.
   GuB-1(Rh64,Cd?-55); RTC-1(Rh80,Ip-26,Iz-25)
3. Q:Not inclined to stop and think before acting.
   GuB-20(Rh55,Mp35); GuC-8(Su36,Pe-34); RTC-20(Mp46,Ip-42,?34,Rh30); RTD-8(Su34,Rh32)
4. Q:Rates self as talkative.
   CaE-29(So52,?27); GuC-22(Su45,Pe-29); RTD-22(Rh40,Su31); SaB-29(E44, So40,Do39,Su31)

FACTOR Sc: Self Confidence

Analyses: BC?
CM?
La
ML
Mo
SaB
ThB?

Confidence in one's own ability to be generally successful.

More specific variables in this area are needed, because there has been no opportunity to separate factors of self confidence in different areas. This factor could reflect general optimism, confidence in succeeding in at least one thing, or confidence in succeeding at most things.

FACTOR Sc (Continued)

Tests with high loadings on this factor:

1. Q:Does not worry about being successful in life.
   ML-1(Sc81)
2. Q:Does not worry about lacking self-confidence.
   ML-3(Sc77)
3. Q:Is, in general, self-confident about his abilities.
   La-49(Sc62,Ne-30); Mo-39(Sc58,So52)
4. Q:Does not lack self-confidence.
   Mo-32(Sc66,So50)
5. Q:Does not have a poor memory that lets him down.
   CaE-13(So30); SaB-13(Sc63)
6. Q:Self-confident about ability to succeed.
   CaE-14(Ss38,So39); SaB-14(Sc58,So30)
7. Q:Does not worry about wanting a more pleasing personality.
   ML-2(Sc55)
8. Q:Does not hesitate to put his abilities to the test.
   La-40(Sc52,Sn-45,Cd-28)
9. Q:Not troubled by useless, stray thoughts.
   CaE-12(?53,?-38,?-26); SaB-12(Sc52,Au-32,?26)
10. Q:Does not find it difficult to get rid of a salesman.
    La-51(Sc51,Sn-25)
11. Q:Does not get discouraged easily.
    Mo-14(Sc50,E-40,G?25)

FACTOR Se: Sensitive Attitude

Analyses:
CaA
CaB?c
CaE?
CSA?
Fe
FT1
FT2
SaB

Attitude favorable toward showing sensitivity to emotional quality and consequent sympathetic understanding of the effects of emotional stimuli upon others.

Analysis SaB furnishes some cross identification between the behavior rating, personality questionnaire, interest, and attitude domains, all of which contribute to this factor. The attitude variables of Analyses FT1 and FT2 are identified with this factor on psychological grounds only, but they form a tight cluster in both males and females that cannot be far from the factor represented by the other variables listed. This is Cattell's Factor I.

Tests with high loadings on this factor:

1. J:Disgust (Terman-Miles, M-F)
   FT1-5(Se80); FT2-5(Se60)
2. J:Low on Thurstone's Capital Punishment scale.
   Fe-7(Sc75); Fe-8(Se75)
3. J:Anger (Terman-Miles, M-F).
   FT1-3(Se60); FT2-3(Se60)

FACTOR Se (Continued)

4. J:Pity (Terman-Miles, M-F).
   FT1-6(Se60); FT2-6(Se60)
5. J:Ethical attitudes (Terman-Miles, M-F).
   FT1-7(Se70); FT2-7(Se50)
6. J:Low on Thurstone's Treatment of Criminals scale.
   Fe-5(Se70); Fe-6(Se71)
7. I:Personnel guidance worker or social science teacher are more congenial than manager or engineer.
   CaE-51(Sc?34,?34,Pe?-33,?-27); SaB-51(Se56,?-53)
8. J:Low on Thurstone's War scale.
   Ch-4(G62), Fe-1(Se59); Fe-2(Se59)
9. J:Fear (Terman-Miles, M-F).
   FT1-4(Se30); FT2-4(Se50)
10. J:Gradual methods can be found vs. war and revolution.
    CaE-71(G?-31,?27); SaB-71(Se47)
11. R:Kindly, soft-hearted vs. hard, stern.
    CaB-19(Do?-39); CaC-19(A46,E29); SaB-99(Se33+)
12. R:Kindly, gentle, idealistic vs. hard, cynical.
    CaA-6(Se38, A 33,So32,Su29)
13. R:Easily upset vs. unshakeable poise, tough.
    CaB-8(Cu-27); CaC-8(E49,?-40), SaB-88(Se28+,E23+,So-23+)
14. C:Female sex.
    CSA-47(Mf-114,Se?27,G?25), SaB-80(?-57,Se37,Ne25); etc., see Factor Mf.
15. Q:Regarded as taking soft-hearted, idealistic rather than practical viewpoint.
    CaE-45(?28,Se?--); SaB-45(Se58)
16. I:Teacher or minister are more congenial than journalist or real estate agent.
    CaE-55(Se?--); SaB-55(Se56,Pe34,Ip26)
17. R:Imaginative, introspective, constructive vs. set, smug, thrifty.
    CaA-34(Se29,Su28)
18. J:State over individual and anti-vivisection vs. nudity and free sex.
    CaE-69(?32,Re30,?-27,Se?--); SaB-69(Se54,Cv50)

FACTOR Sf: Sophistication

Analyses: CaC
CaE?
GuA
SaB

Having the manners and social interests characteristic of polite society.

This is a poorly established factor that seems to include socially correct dress and manners executed with polish and reserve, and consideration for others, probably out of principle rather than kindness. This is Cattell's Factor N. Compare with Factor Cu.

FACTOR Sf (Continued)

Tests with high loadings on this factor:

1. Q:Scrupulously correct in manners and social obligations.
   CaE-24(Sf?52,?32); SaB-24(Sf72)
2. Q:Considerate of other people's feelings.
   CaE-25(Ne-35,?-35); GuA-7(Sf77); GuB-5(Iz28); RTC-5(Iz34)
3. Q:Particular about dress and property.
   GuA-6(Sf64,Ip-33)
4. R:Polished vs. clumsy, awkward.
   CaB-21(Cu32); CaC-21(Sf78,Cu57,Ei-26,Su-25); SaB-101(Pe30+,Sf--)
5. R:Cool, aloof vs. attentive to people.
   CaB-7(A-33,Pe-29); CaC-7(Sf57,A-43,Su-34); SaB-87(Sf--)
6. Q:Enjoys being at large gatherings or parties.
   CaE-19(So41,Pe?-26,Sf?--); SaB-19(Sf55,?-29)

FACTOR Sn: Self-consciousness

Analyses: Gi?c
La
Mo

Embarrassment in performing or being conspicuous in front of strangers or crowds.

This factor is distinguished from Shyness, the inverse of Factor So, in both Analyses La and Mo. The difference seems to be that Shyness implies embarrassment at participation within social groups, while Self-consciousness implies embarrassment at performing in front of social groups.

Tests with high loadings on this factor:

1. Q:Feels embarrassed entering assembly with others seated.
   La-22(Sn88)
2. Q:Finds it difficult to speak in public.
   GuA-21(So-39,T-33,Mf-28), Mo-33(Sn80,Sc-28)
3. Q:Gets stage fright.
   Mo-1(Sn77,Sc-25)
4. Q:Feels self-conscious reciting in class.
   Mo-25(Sn72,So-28)
5. Q:Feels self-conscious in front of strangers or a crowd.
   La-46(Sn68,E27)
6. Q:Has difficulty thinking of appropriate remark in conversation.
   La-20(Sn65,So-34)

FACTOR So: Sociability

Analyses:
BaB?
CaA
CaB?
CaC?
CaE
CSA?c
Fn?
Fn?c
Gi?c
GuA
GuB
Ko?
La
Lo?
MD?
Mo
No?c
Ri?
RTA?c
RTB
RTC
SaB
Ts?c

Participation and aggressiveness in social activities.

No differentiation is made here between participating in social relations with friends and initiating social relations with strangers. The term shyness is often used as the inverse of this factor. This is Cattell's Factor H.

Tests with high loadings on this factor:

1. Q:Not inclined to keep in background on social occasions.
   GuA-18(So66); GuB-12(So69); La-38(So54,Gs36,Sn-35,Au-30); Mo-7(So67,Lo28); RTC-12(So68)
2. Q:Not slow at making new friendships.
   CaE-2(So69); La-10(So67,Ss35,Sn-34); Mo-18(Lo-50,So42,G?-36,Sc30); RTB-1(So51); SaB-2(So62,Do39,Se25)
3. Q:No difficulty starting a conversation with strangers.
   GuB-2(So65); La-25(Sn-50,So45,Au-43); Mo-2(So57,Sn-35); RTC-2(So66)
4. Q:Enjoys getting acquainted with most people.
   GuA-26(So65); GuB-15(So55,Cd?-26); La-23(Gs64,So25,Sn-25); RTC-15(So66)
5. Q:Free from self-conscious shyness; so not in background on social occasions.
   CaE-1(So67,?-28); SaB-1(So70,?33)
6. Q:Not inclined to keep quiet when out in company.
   GuA-27(So72); La-11(So56,Gs35,Sn35)
7. Q:Is not troubled with shyness.
   Mo-12(So71,Sn-36)
8. Q:Does not find it difficult to address a large group.
   CaE-17(So51,Ss40,G?-30); SaB-17(So60)
9. Q:Takes prominent part in social affairs and entertainments.
   RTB-7(So67,E-28)
10. R:Composed vs. shy, bashful.
    CaB-28(So?40,Cu35); CaC-28(?40,So?30); CSA-11(?66,Mf-49,Se?-29); SaB-108(So43+,Su21+)
11. Q:Talkative, enjoys verbal expression.
    CaE-29(So52,?27); GuC-22(Su45,Pe-29); RTD-22(Rh40,Su31); SaB-29(E44, So40,Do39,Su31)
12. Q:In last 5 years have been active in organizing clubs or teams.
    La-27(So56)

FACTOR Ss: Self-sufficiency

Analyses:
BaB?
BC?
BT
CaE
Fn
Gi
La
Ri
SaB
St1
St2

The ability and preference for facing intellectual and emotional problems alone.

FACTOR Ss (Continued)

This is not concerned with prediction of success in overcoming these problems as in Self-confidence. It implies no general desire to be alone as does the inverse of Gregariousness.

Tests with high loadings on this factor:

1. Q:Plans alone without suggestions or discussion.
   BT-11(Au32,Gs-32,Ss30); CaE-21(Ss54,Ne-26); La-18(Ss68,Gs-25); SaB-21(Ss60,?33)
2. Q:Becomes so absorbed in creative work that he does not mind lack of friends.
   BT-4(Gs-50,SJ-35,Ss33); CaE-18(Ss36,Se?25); SaB-18(Ss66)
3. Q:Likes to travel alone rather than with guide.
   CaE-20(Ss40); SaB-20(Ss64)
4. Q:Bernreuter B2- Self Sufficiency.
   Fn-2(Ss65,?59)
5. Q:Prefers to work things out his own way rather than accept suggestions.
   La-14(Ss65,Gs-25)
6. Q:Flanagan's F2-S scale of the Bernreuter P.I. - Solitariness.
   Gi-4(Ss61)
7. Q:Gets self out of difficult situations without help.
   St1-5(Ss51), St2-45(Ss61)
8. Q:Usually understands a problem better alone than with discussion.
   La-9(Ss55,Gs-30)
9. Q:Usually faces troubles alone without seeking help.
   St1-10(Ss68), St2-31(Ss40,De30)
10. Q:Prefers to be alone at times of emotional distress.
    BT-20(Ss53,Ip32)
11. Q:No difficulty making up his own mind.
    St1-44(Ss61), St2-9(?44,Ss35)
12. R:Merill-Palmer, Independence adult affect scale.
    Ri-5(Ss52,A36)

FACTOR Su: Surgency

Analyses:
BaB
CaA
CaB
CaC
CE?c
CW
Ey?c
GuC
Ho
RTA?c
RTD
SaB
ThB?
Ts?c
WL2

General drive resulting in bodily activity, fluent speech, and euphoria.

Energy, speed of movement, and general bodily activity are clear throughout. Variables 7, 9, 10, 11, and 14 in the list below bring out a relation to buoyant mood or general good humor. Analysis CaA is not represented on the list because of the lowness of its loadings for this factor; its Factor Su is composed entirely of the cheerfulness rather than the activity aspect. This is Cattell's Factor F.

FACTOR Su (Continued)

Tests with high loadings on this factor:

1. Q:Inclined to be quick in actions.
   GuC-18(Su81); RTD-18(Su80)
2. R:Bodily activity.
   Ho-8(Su80)
3. Q:Can turn out much work in a short time.
   GuC-20(Su60); RTD-20(Su56)
4. Q:MMPI Hypomania scale.
   Ab1-17(Pc55,E?27); Ab2-17(?52); Co-11(Pc56); CW-11(Su56,?41); Ty-9(?44,?-31); WL1-12(Pc62); WL2-12(Su59)
5. Q:Moves quickly, rushes vs. being slow and deliberate.
   CaE-34(Ne36); SaB-34(Su69,Ne30)
6. R:Energetic, alert vs. languid, slow.
   CaB-9(Su59); CaC-9(Su40,Cu25); SaB-89(H38+,Su29+)
7. Q:Low on MMPI Depression scale.
   Ab1-10(E?-49,?-37,?-26); Ab2-10(?-84,?-26); Co-4(E-51); CW-4(Su48, ?-28); Ty-2(Pc-59,?-31); WL1-5(E-65,Pc-48); WL2-5(Su59,E-53,Pc-50)
8. Q:Inclined to rush without pause.
   GuC-12(Su53,?37); RTD-12(Su52,?28)
9. R:Lack of fear.
   Ho-12(Su65,E?-61)
10. R:Talkative vs. silent, introspective.
    CaB-16(Su33); CaC-16(Su44); SaB-96(So43+,Pe-28+,Su24+)
11. R:Cheerful vs. depressed, solemn.
    CaB-5(Su47,Do?33); CaC-5(Su34); SaB-85(Pe-29+,So24+,Su16+,Do-16+)
12. Q:Not inclined to be slow and deliberate in movement.
    GuA-24(So41,Sf-25); GuC-5(Pe-57,?35,Su28); La-6(So48); RTD-5(Su62,Pe-25)
13. R:Energetic.
    BaB-7(Su54)
14. R:Enthusiastic.
    BaB-8(Su53)

FACTOR Wi: Will Control vs. Suggestibility and Perseveration

Analyses:	BrA	Kr
	CaD?	RTB?
	CSA?	

Voluntary control over behavior in the face of either opposing suggested activities or perseverative tendencies.

This factor is probably the one frequently referred to in the literature as Webb's "w" factor, see Analysis RTA. It is evidently the inverse of Factor Pn in Psychological Monograph, No. 5, found by Rethlingshafer (see Factor Pe). The name was changed from perseveration, because that is too limited a concept to fit the variables with high loadings on this factor.

Tests with high loadings on this factor:

1. R:Does not do what others do for the sake of doing it.
   Kr-9(Wi68,Ei?-29)

FACTOR Wi (Continued)

2. T:Time spent on word-building test.
   Kr-4(Wi56,Pe?25)
3. T:Resistence to suggestion: a variety of tests combined.
   BrA-5(Wi53)
4. T:Time spent on coding test instead of going to playground.
   Kr-5(Wi53)
5. R:Is not easily led by others.
   Kr-18(Wi52)
6. T:S Perseveration Test, low perseveration.
   BrA-21(Wi46,Pe-27)
7. T:V Perseveration Test, low perseveration.
   BrA-22(Wi38,Pe-33,Ho-26)

SUPPLEMENTARY FACTOR LIST

This is a list of factors whose interpretation is possible, but which have not been described fully, because they have been identified in one analysis only. Aptitude factors found in single (or several) analyses are not included in this list, but are named or made reference to in footnotes to the tables of loadings. The letters following the factor names are the code letters of the analysis in which they were identified. The factor names used in this list, as in the case of all factor names used in Part II, represent interpretations of the writer which try to be most helpful in the light of all the literature covered, but which are not necessarily the same as those made by the authors of the analyses.

Familial Adjustment, MD
Flexibility vs. Rigidity, CT
Halo, Buddy-Rating, SB
Halo, Self-Rating on Cognition, SB
Halo, Self-Rating on Personality, SB
Marital Boredom, CaF
Maturity, Ko
Mechanics, Interest in, To
Nature and Agriculture, Interest in, To
Phobic-Compulsive Reaction, WH
Radicalism, Ch
Schizophrenic Reality Distortion, LW
Social Leadership, Stl

INDEX I

VARIABLES

All of the variables used in the analyses covered by this survey are listed here. Where the variable has a name, the name is used. Where the variable is a questionnaire item, it is listed under one or more of the most specific or characteristic words or phrases in the item. For multi-scaled inventories there is an entry for each scale as well as for the name of the inventory. The code letters or numbers following the variable's name correspond with those in *Part I* associated with the variable descriptions and the variable factor loadings. In cases where the variable is used in *Part II* to describe one or more of the factors, the word *Factor* and the code letters of the factor are given. In such cases the full summary of loadings can be found by finding the variable in the list under the factor indicated. The key to the factor code letters is the *Table of Contents for Part II*. In cases where the index entry is combined with other measures in the variable a small *c* follows the code designation.

- R Abandons tasks, from changeability, RTA-19, Factor Pe
  - R in face of obstacles, RTA-18, Factor Pe
- C Abhorred act, fears committing, WH-47, Wi-47
- Q Abilities, put to a test, La-40, Factor Sc
- C Abnormal before illness, CE-11, Ey-11, Factor Pc
- Q Absent minded, GuA-16, Factor Mf
- Q Absorbed in work, BT-4, CaE-18, SaB-18, Factor Ss
- I Accountant (Strong), Sg-25, see also Certified P.A.
- Q Achievement (MMPI), Ty-13
- Q Acquaintances, limit, La-19
- Q Acquainted, enjoy getting, GuA-26, GuB-15, La-23, RTC-15, Factor So
- Q Act on spur of moment, GuA-8
- R Active, BrB-23
  - R etc., CaA-16, Factor E
  - Q (Thurstone-Guilford factor), BaA-6
- R Activity, bodily, Ho-8, Factor Su
  - Q general (Guilford factor G), Lo-6, ThB-6
  - C minimum overt, WB-17, WH-32, Wi-32, WM-17, Factor Ma
  - I preference (Terman-Miles), FT1-10, FT2-10, Factor Mf
- Q Adapt easily, GuA-28
- R Adaptable, etc., CaA-8
  - R vs. rigid, CaB-23, CaC-23, SaB-103
- T Addition, DT-4c
- Q Address a group, hard to, CaE-17, CSA-29c, SaB-17, Factor So
- Q Adjusted poorly to life, CaE-9, SaB-9
- J Adjustment, general, MD-7
- R Admiration, eager for, RTA-8
- R Adventurous, etc., CaA-30
  - R vs. cautious, CaB-18, CaC-18, SaB-98, CSA-5c
- I Advertising Man (compared), CaE-56, CSA-25c, SaB-56, Factor Ip
  - I (Strong), CP-1, Sg-32, ThA-1, Factor Il
- I Aesthetic (Allport), Du-3, FH-3, Factor Ib
  - R interests, etc., CaA-25
  - IJ interests, ideals, preferences, beliefs, La-9-12, Factors Ib, Ie, Iw
- R Affect, adult, Ri-5, Factor Ss
  - C exaggerated, WH-54, Wi-54
  - R inadequate, LW-5
- R Affected, etc., CaA-23
- R Affectionate, BrB-22, Factor A
- C Affective response failures, WH-41, Wi-41, Factor Ma
- Q Afraid of discussion, ML-4
- C After-image time, CaG-46
- C Age, CE-1, CP-24, Ey-1, Ko-37, SaB-116
- Q Aggression, covert, BC-4
  - Q overt, BC-7, 20, Factor Do
- R Aggressive, buddy and self rating, SB-13-14, Factor Do
- C Aggressiveness, over-, HJ-12, Factor Ei
- R Agreeableness, BaB-1

VARIABLES

- Q Agreeableness (Guilford factor Ag), Lo-12, ThB-12, Factor A
- T Agreement with majority, CaG-45
- I Agriculture (Brainard), To-44
  - I (Texas), To-41
- C Alcohol, excessive, CE-10,Ey-10
- Q Alert, CaE-39, CSA-32c, GuB-30, RTC-30, SaB-39, Factor Al
  - R etc., CaA-29
  - R vs. languid, CaB-9, CaC-9, SaB-89, Factor Su
- T Alertness with directions, CaG-24
- Q Allport A-S Reaction Study, Gi-1
- I Allport-Vernon Study of Values, Du-1-6, FH-1-6, Lu
- Q Alone, enjoys evening, BT-13, La-13, St1-30, St2-42
  - Q faces troubles, St1-10, St2-31, Factor Ss
  - Q in stress, BT-20, Factor Ss
  - Q plans, BT-11, La-18, CaE-21, CSA-29c, SaB-21, Factor Ss
  - Q prefers being, La-1
  - Q study a problem, La-9, Factor Ss
  - Q work, BT-21, GuA-14, La-50, RTB-9
- R Aloof, etc., CaA-22
  - R vs. attentive, CaB-7, CaC-7, SaB-87, CSA-1c, CSA-16c, Factor Sf
- T Alternating perspective, CaD-19, CaG-6, CSA-33c
- Q Ambition needs stimulation, BT-17
- R Ambitious, buddy and self rating, SB-1-2
- X America, congenial, CaF-42, CM-1, Factor If
  - X remain powerful, CaF-27
- T American Council Ed. Psych. Ex., CaB-36, CaC-36, CaD-1, CaG-8, Mo-40, SB-23, Factor G
- R Analytical, etc., CaA-2, Factor G
- R Anger, Ho-13, RTA-6
  - R readily recovers, RTA-5
  - J (Terman-Miles), FT1-3, FT2-3, Factor Se
- R Angry, readily becomes, RTA-4
- J Annoyed at: appearance, CaE-76, CSA-26c, SaB-76
  - J bragging, CaE-78, CSA-30c, SaB-78
  - J cleaning nails, GuC-10, RTD-10
  - J dirt, Be-6
  - J frustration, Be-4
  - J inadequacy, Be-5
  - J manners, CaE-77, SaB-77, Factor Cv
  - J noise, Be-7
  - J unintentional acts, CaE-79, CSA-25c, CSA-32c, SaB-79, Factor Ir
- R Anti-social, etc., CaA-14, Factor A
- Q Anxiety, FK-26
  - C distressed by, WH-28, Wi-28, Factor Ax
  - C dreams, CE-31, Ey-31
  - Q fits of, CaE-41, CSA-32c, SaB-41, Factor Au
  - Q questionnaire, Be-1
  - C somatic, CE-19, Ey-19
- R Anxious vs. placid, CaB-26, CaC-26, SaB-106, CSA-8c, CSA-15c, Factor E
- C Apathy, CE-27, Ey-27
- I Architect (compared), CaE-52, CSA-30c, SaB-52, Factor Is
  - I (Strong), CP-2, Sg-3, ThA-11, Factor Is
- Q Argue past guard, CaE-16, La-29, SaB-16, Factor Do
- T Arithmetical Reasoning (Navy), CW-14
- C Army, boarded out of, CE-39, Ey-39
- I Art vs. social, CaE-61, CSA-29c, SaB-61
- I Artist (compared), CaE-47, CaE-58, CSA-19c, SaB-47, SaB-58, Factor Is
  - I (Strong), CD-3, CP-3, Sg-1, ThA-2, Factors Il, Is
- I Artistic (Guilford), To-12-13, Factor Ie
  - R feeling, lacking, CaB-31, CaC-31, SaB-111, Factor Cv
  - I (Kuder), Co-25, Factor Iw
  - I (Thurstone), To-10
- I Arts (Lee-Thorpe), To-34, Factor Ie
- R Ascendance, Ho-14, Ri-9
  - R etc., CaA-21
  - Q (Guilford's factor A), Lo-7, ThB-7
- T Aspiration level, CaD-33, CSA-39c
- C Assaultive, HJ-8
- C Assaults, initiates, WB-19, WH-37, Wi-37, WM-19
- R Assertive, etc., CaA-35
  - R self, etc., CaA-1
  - R vs. submissive, CaB-4, CaC-4, SaB-84, CSA-4c, CSA-7c
- T Associational memory, emotional, CaG-29
  - T with fear, CaG-30, CaG-64
- T Assumptions, state logical, CaD-42, CaG-16, CSA-42c
- R Asthenic build, LW-17
- Q Athletics, absorbed in, GuB-28, RTC-28, Factor Ia
  - I outdoor (Guilford), To-21
  - X take part in, CaF-1, CM-8, Factor Ia

VARIABLES

Q Athletics, vs. intellectual, BT-2, CaE-37, CSA-28c, GuA-19, GuB-13, RTC-13, SaB-37, Factors Ia, Ip
X Atom-bomb. protect from, CaF-2, CM-18, Factor Fe
C Attack, Ko-26-28
Q Attention when ill, BT-15
C Attention-demanding, WH-31, Wi-31, Factor Ma
C Attention-getting, behavior, HJ-15, Factor Ei
R vs. self-sufficient, CaB-3, CaC-3, SaB-83, CSA-2c
C Attention-seeking, Ko-16
Q Attentive, GuB-21, RTC-21, Factor Al
R BrB-2
R vs. cool, CaB-7, CaC-7, SaB-87, CSA-1c, CSA-16c, Factor Sf
R Attractiveness, physical, Ri-7
R of personality, Ri-8
T Australian Inst. Ind. Psych. Clerical, Gi-6-9
I Author-Journalist (Strong), CD-1, CP-9, Sg-34, ThA-15, Factors Gs, Il
R Authoritarianism, SB-19
J Authority, BrA-15
X fight, CaF-48
R respect for, Ri-2
R Autistic, etc., CaA-10, Factor E
I Aviator (compared) CaE-56, CSA-25c, SaB-56, Factor Ip
C Avoids people, WB-7, WH-13, Wi-13, WM-7, Factor Ma

Q Background, keeps in, GuA-18, GuB-12, La-38, Mo-7, RTC-12, Factor So
I Banker (compared), CaE-52, CSA-30c SaB-52, Factor Is
I (Strong), Sg-28
X Bath, enjoy luxury of, CM-23
IJ Beliefs, Spranger types, Lu
Q Bell Adjustment Inventory, Co-31-34, MD-8-13
Q Bernreuter Personality Inventory, Fn-1-4
R Bias, constitutional, LW-12
I Biographical Inventory (Sims), To-49
I Biological Science (Thurstone), To-3
X Birth Control, CaF-41
J (Thurstone), Ch-5, Fe-11-12, Factor Re
Q Biting, BC-13
C Blocking, failure and, WH-49, Wi-49, Factor Ax
Q Blues, often has, GuB-11, RTC-11
Q spells of, La-30, Factor Cd
Q Blunt, RTB-8
R Boasts, Kr-23
R Boisterous, Kr-20
R vs. quietness, Ts-18
Q Books, over companions, BT-9, Factor Au
I (Terman-Miles), FT1-9, FT2-9, Factor Mf
R Boorish, vs. cultured, CaB-10, CaC-10, SaB-90, CSA-7c, CSA-14c, Factor Cu
C Bosses, Ko-23
C Bravado, HJ-17, Factor Ei
T Burt's Northumberland Scale of Intelligence, Ho-16
I Business, Contact (Strong), Co-16, Factor Is
I Detail (Strong), Co-15, Factor Ic
I (Lee-Thorpe), To-33, Factor Ic
I (Texas), To-36-37, Factor Ic
I (Thurstone), To-5
I Business-Political (Guilford), To-22-23

R Calm, etc., CaA-26, Factor Ei
R vs. emotional, CaB-13, CaC-13, SaB-93, CSA-7c, CSA-9c, Factor E
R vs. nervous, Ts-4
X Campus, like being on, CaF-29
J Capital Punishment (compared), CaE-67, CSA-28c, SaB-67
J (Thurstone), Fe-7-8, Factor Se
Q Carefree, GuB-1, RTC-1, Factor Rh
T Carefulness, CaG-25
T in minor drawing, CaG-58
I Carpenter (compared), CaE-56, CSA-25c, SaB-56, Factor Ip
I (Strong), Sg-12, Factor Il
T Cattell culture-free, CT-17
R Cautious vs. adventurous, CaB-18, CaC-18, SaB-98, CSA-5c
I Certified Public Accountant (compared), CaE-58, SaB-58
I (Strong), CP-4, FH-9, Sg-24, ThA-3, Factor Ib
Q Change types of work, GuA-11, GuC-3, RTD-3, Factor Pe

VARIABLES

R Changeability, abandon tasks from, RTA-19, Factor Pe
R   etc., CaA-4
R   etc., CaA-28
R   vs. emotional stability, CaB-2, CaC-2, SaB-82, CSA-9c, CSA-10c, Factor Pe
Q Changed frequently, likes task, GuC-13, RTD-13, Factor Pe
R Character, neurosis, etc., CaA-17
I   preferences, questionable, BrA-14
R Characterless, etc., CaA-28
T Cheating, CaD-12
R Cheerfulness, BaB-2, BrB-17, Ho-7
R   etc., CaA-15
R   vs. depressed, CaB-5, CaC-5, SaB-85, CSA-4c, CSA-5c, Factor Su
R   vs. depressed, RTA-1
Q Cheering up when low, BT-16
I Chemist (compared), CaE-52, CSA-30c SaB-52, Factor Is
I   (Strong), CP-5, FH-14, Sg-9, ThA-4 Factor Is
T Chicago Entrance Psych. Ex., Ch-1, Factor G
X Children, education for, CaF-50, CM-2, Factor If
I   encourage at school (comparison), CaE-57, SaB-57
X   help, CaF-46, Factor If
I Church, give to (compared), CaE-62, SaB-62, Factor Re
I   convey worship, CaE-54, SaB-54, Factor Ir
I City School Superintendent (Strong), CP-23
T Classifying, CaD-46, CaG-17
Q Cleanliness, BC-2
I Clerical (Kuder), Co-29, Factor Ic
I   Office Work (Guilford), To-28, Factor Ic
T Clinical, CT-16
Q Close touch with things, GuB-9, RTC-9, Factor Al
T Closure, speed of, CaD-7, CSA-40c
Q Clothing, brings own, St1-38, St2-2
R Clumsy vs. polished, CaB-21, CaC-21, SaB-101, CSA-14c, CSA-16c, Factors Cu, Sf
T Coding, Kr-5, Factor Wi
Q Coffee disturbs sleep, CaE-75, SaB-75
R Cold, etc., CaA-22
T Color-form sorting, CaD-23, CaG-19, CSA-35c
X Command people, CM-30
I Commercial (Brainard), To-42
R Common sense, Ho-3
J Communism (Thurstone), Ch-2, Factor G
Q Compelled to do trivial tasks, CaE-43, SaB-43
Q Complains to waiter, CaE-15, CSA-31c SaB-15, Factor Do
T Completion, DT-5c
C Compliance, Ko-22
R   Ri-1
R Composed vs. shy, CaB-28, CaC-28, SaB-108, CSA-8c, CSA-11, CSA-13c, Factor So
C Compulsive, WH-35, Wi-35
C   acts, WH-19, Wi-19
I Computational (Kuder), Co-22, Factor Ic
I   (Thurstone), To-4
X Comradeship, CaF-14
R Conceit, BrB-29, Factor Ei
CT Conductance measures, FK-1-10
Q Confides in others, GuA-29
R Conscientiousness, RTA-14
R   etc., CaA-11
Q   in work, St1-14, St2-47
Q   over-, GuB-17, RTC-17
T   (Pressey), BrA-24
R   vs. unscrupulous, CaB-27, CaC-27, SaB-107, CSA-3c
Q Consequences, can take, St1-16, St2-46
Q Considerate of feelings, CaE-25, CSA-27c, GuA-7, GuB-5, RTC-5, SaB-25, Factor Sf
C Constipation, Ko-36
R Constructive, etc., CaA-34, Factor Se
R Contentment, BrB-14
Q Control, inhibitory, FK-28
X   mental processes, CM-27
R Conventional, etc., CaA-16, Factor E
R   vs. not, CaB-25, CaC-25, SaB-105, CSA-15c, Factor Cv
Q Conversation, difficulty in, La-20, Factor Sn
Q   difficulty starting, GuB-2, La-25, Mo-2, RTC-2, Factor So
C Converse, Ko-25

V A R I A B L E S

Q Convinced easily, St1-54, St2-15
R Cool vs. attentive, CaB-7, CaC-7, SaB-87, CSA-1c, CSA-16c, Factor Sf
R Cooperativeness, BaB-3, Bo-8, Ts-9, Factor A
R   etc., CaA-14, Factor A
Q   (Guilford factor Co), Lo-13, ThB-13, Factor A
R   vs. obstructuve, CaB-1, CaC-1, SaB-81, CSA-1c, Factor A
T Coordination, peeping, BrA-2, Factor Ho
R Copies people, Kr-9, Factor W_1
R Corporate spirit, RTA-12, Factor A
Q Correction factor (MMPI), WL1-2, WL2-2, Factor Pc
R Courtesy, Ts-8
T Creative effort motor perseveration, CT-2
R Creatively unstable, etc., CaA-16, Factor E
R Credulity, BrB-26, Factor G
J Criminals, treatment of (Thurstone), Fe-5-6, Factor Se
T Criticalness, CaD-29, CSA-34c
Q   RTB-8
Q   of people, BT-24
T Criticism, extra-punitive, CaG-44
T   ratio, CaD-30
Q   stand, Mo-17, Factor E
T   vs. approval of self, CaG-27
Q Crowd, enjoys, La-15
C Cry and whine, Ko-12
R Cultured vs. boorish, CaB-10, CaC-10, SaB-90, CSA-7c, CSA-14c, Factor Cu
T Culture-free, CT-17
Q Curiosity, BC-15
X   like to satisfy, CM-17
T Cursive miniature situation, CaD-13, CaD-34, CSA-44c, CSA-45c
Q Cycloid disposition (Guilford factor C), Lo-4, DT-12, No-4, ThB-5
C Cychothymic, CE-15, Ey-15, Factor Pc
R Cynical, etc., CaA-6, Factor Se

X Danger reduced, CM-20, Factor Fe
C Dark adaptation, CaD-8
C Daydreams, Ko-18
Q   BT-1, CaE-11, CSA-31c, GuA-13, Mo-13, SaB-11, Factor Au
R   Kr-14
Q   instead of work, La-43, Factor Au

Q Decide, when child is injured, St1-48, St2-12
C Decisions, cannot make, WH-43, Wi-43, Factor Ma
Q   hurried alone, BT-23
Q   slow at, BT-3
R Decisive, BaB-4
Q Defiant resentment, BC-17
C Degraded work history, CE-4, Ey-4
C Delinquent siblings, HJ-4
C Delusional thinking, WB-12, WH-24, Wi-24, WM-12, Factor Ps
R Delusions, bizarre, LW-14
R Demanding, etc., CaA-27, Factor Ei
R   vs. emotionally mature, CaB-24, CaC-24, SaB-104, CSA-6c, Factor Ei
R Demonstrative, BaB-5
R Demoralized, etc., CaA-10, Factor E
I Dentist (Strong), CD-5, Sg-5, Factor Is
R Dependability, Bo-7, Ts-22, Factor De
Q Dependent, BC-9
R   etc., CaA-3
C   personality, CE-13, Ey-13, Factor Pc
D Depressed, by low marks, Mo-21
R   vs. cheerful, CaB-5, CaC-5, SaB-85, CSA-4c, CSA-5c, Factor Su
R   vs. cheerful, RTA-1
R   vs. not, CaB-35, CaC-35, SaB-115, CSA-4c, CSA-6c
R Deportment, BrA-25
C Depression, CE-32, Ey-32
Q   (Guilford's factor D), Lo-3, DT-11, No-3, ThB-3
R   liability to, RTA-3
Q   (MMPI), Co-4, Ab1-10, Ab2-10, CW-4, Ty-2, WL1-5, WL2-5, Factors E, Su
Q   questionnaire, Be-3
I Designing, Mechanical (Guilford), To-19
X Destroy country threatening America, CaF-9, CM-19, Factor Fe
C Destructiveness, HJ-6
Q Detailed work, GuA-5
Q Diary, have kept, GuA-9
Q Different, uncomfortable when, La-45
T Directions (Otis), BrA-37, Factor G
Q Discouraged, easily, Mo-14, Factor Sc
Q   when opinions differ, La-44
C Disease, use made of, WB-5, WH-9, Wi-9, WM-5, Factor Hy
J Disgust (Terman-Miles), FT1-5, FT2-5, Factor Se

VARIABLES

Q Disparaging things, people saying, La-48
R Disposition, Ts-16
Q Distracted easily, GuC-4, RTD-4, Factor Ne
T Distraction, CT-8
X Divorce, easier, CaF-17
J   easy (compared), CaE-64, CSA-31c SaB-64, Factor Re
Q Do a thing over, Mo-35
R Does what others do, Kr-9, Factor Wi
Q Dominance (Bernreuter), Fn-4
R   buddy and self rating, SB-11-12, Factor Do
Q   (MMPI), Ty-15
Q   (Thurstone-Guilford factor), BaA-5
C Doom, feels impending, WB-10, WH-18, Wi-18, WM-10, Factor Ax
R Dour, etc., CaA-15

Q Draws in lecture, GuC-14, RTD-14, Factor Ne
Q Dress, particular about, GuA-6, Factor Sf
X Dressed smartly, CaF-36, Factor Cv
X Drinking, wants more, CaF-49, CM-21, Factor If
C Drive and energy, CE-14, Ey-14, Factor G
R Driven, etc., CaA-18
X Drives self, CaF-39
J Duty, questionnaire, BrA-18
T Dynamic momentum, CaD-16

R Easy-going, etc., CaA-9, Factor A
R   vs. spiteful, CaB-12, CaC-12, SaB-92, Factor A
Q Eats, rapidly, GuC-11, RTD-11
C   refuses to, WH-10, Wi-10
I Economic, (Allport), Du-2, FH-2, Factors Ib, Il
J   conservatism, MD-5
IJ   interests, ideals, preferences, beliefs, La-5-8, Factors Ib, Ir
I   reform (compared), CaE-64, CSA-31c, SaB-64
J Education, MD-6
I   discipline in (compared), CaE-64, CSA-31c, SaB-64, Factor Re
J Educational and social institutions, BrA-20
R Efficiency, Bo-5
R   buddy and self rating, SB-3-4
C Effort intolerance, CE-20, Ey-20, Factor E
R Egotistic, etc., CaA-7, Factor Do
R   vs. mild, CaB-15, CaC-15, SaB-95, CSA-1c, CSA-3c
C Eidetic imagery, CaG-55
T Electrical Knowledge (Navy), CW-17
R Elgin Prognostic Scale, LW-1-17
Q Embarrassed, entering assembly, La-22, Factor Sn
Q   greeting stranger, La-17
Q Emergency, what to do in, St1-25, St2-58, see also Decide
Q   expresses readily, GuA-30, GuC-6, RTD-6
T   impairs performance, CaD-25, CaG-13, CSA-45c
C   pathology from, WB-16, WH-29, Wi-29, WM-16
Q   under control, CaE-23, CSA-27c, SaB-23, Factor Ne
J   vs. science, CaE-68, SaB-68
Q Emotional (Bell), Co-34, MD-11, Factors E, Pc
R   buddy and self rating, SB-17-18
Q   distress, alone, BT-20, Factor Ss
R   maturity, etc. CaA-17
R   maturity, etc., CaA-27, Factor Ei
Q   more than average, La-37, Factor E
R   restlessly, etc., CaA-26, Factor Ei
R   stability, BaB-6, FK-17
C   stability, HJ-9
Q   stability (Guilford factor C), Lo-4, No-4, ThB-5
Q   stability (Thurstone-Guilford factor), BaA-3
R   stability vs. changeable, CaB-2, CaC-2, SaB-82, CSA-9c, CSA-10c, Factor Pe
Q   upset, La-37
R   vs. calm, CaB-13, CaC-13, SaB-93, CSA-7c, CSA-9c, Factor E
R Emotionality, BrB-33
Q   FK-22
R   with maladjustment, etc., CaA-20, Factor E
R Energy, BaB-7, Factor Su
C   and drive, CE-14, Ey-14, Factor G
R   tone, low, LW-11
Q   uses up, GuC-19, RTD-19
R   vs. languid, CaB-9, CaC-9, SaB-89, CSA-5c, Factor Su
I Engineer, (compared), CaE-51, CSA-25c, CSA-26c, CSA-30c, SaB-51, Factor Se

VARIABLES

I (Strong), CP-7, Sg-8, ThA-5, Factor Is
I English Teacher (Strong), CD-8, Factor Il
R Entertaining, Ts-19
R Enthusiastic, BaB-8, Factor Su
R   etc. CaA-15
C Enuresis, HJ-21
T Ergograph, CaD-45
I Esthetic (Brainard), To-47
R Esthetically fastidious vs. not, CaB-31, CaC-31, SaB-111, CSA-6c, CSA-16c, Factor Cv
J Ethical attitudes (Terman-Miles), FT1-7, FT2-7, Factor Se
J Ethics, BrA-19
C Evasiveness, HJ-22
Q Evening, enjoys alone, BT-13, La-13, St1-30, St2-42
Q   lost or bored in, St1-34, St2-8
R Even-tempered, BaB-9
C Evil, belief he is, WB-2, WH-5, Wi-5, WM-2, Factor Ax
J Evolution, church vs. science on, CaE-66, CSA-22, SaB-66, Factor Re
J   (Thurstone), Fe-9-10, Factor Re
C Exaggerated affect, WH-54, Wi-54, Factor Ma
C Exaggerates ability and well-being, WH-20, Wi-20, Factor Ma
Q Exam, upset at, St1-32, St2-4
T Examination, Term, Ho-15, Factor G
R Excitability, Ho-9
Q Excited and rattled easily, CaE-5, CSA-27c, GuA-35, La-33, SaB-5
Q Excitement, crave for, CaE-27, CSA-25c, CSA-26c, SaB-27, Factor Pe
Q   craves, GuB-18, RTC-18
Q   state of, La-32, Mo-23, Factor Ne
T Excuses, personal, CaG-43
I Executive (Thurstone), To-6
Q Exhibitionism, BC-3
Q Experience vs. read, GuA-4, GuB-3, RTC-3
Q Expresses emotions readily, GuA-30, GuC-6, RTD-6
R Expressiveness, BrB-27
R   etc., CaA-18
R   etc., CaA-21
Q Extraversion (Guilford factors), Lo-1-2, No-1-2, ThB-1-2

R Facile, etc., CaA-23
R Facing life, etc., CaA-10, Factor E
C Failure and blocking, WH-49, Wi-49, Factor Ax
C Fainting fits, CE-22, Ey-22, Factor E
T Fairmindedness, CaD-27
T False book list, BrA-3, Factor Ho
J Family, MD-3
J   vs. friends, CaE-72, SaB-72, Factor Cv
I Famous people (Terman-Miles), FT1-11 FT2-11
I Farmer, (compared), CaE-58, SaB-58
I   (Strong), CP-8, Sg-11, ThA-13, Factor Il
R Fear, Ho-12, Factor Su
J   (Terman-Miles), FT1-4, FT2-4, Factor Se
Q Feelings, alternate, Mo-11, Factor Cd
Q   easily hurt, CaE-4, GuA-25, Mo-6, SaB-4, Factor E
C   unaware of, WB-4, WH-8, Wi-8, WM-4, Factor Dt
Q Feminine, anti-, feelings, Bc-22, Factor Ix
T Fidgetometer frequency, CaG-61
Q Financial dependence, ML-5
T First and Last Letters, DT-6c
T First names, DT-1c
Q Fits of anxiety, CaE-41, CSA-32c SaB-41
T Flags, CT-12
Q Flanagan Scales (Bernreuter), Gi-3-4, Factor Ss
T Flicker fusion, CT-9
C Flit, Ko-30
T   of attitudes, CaD-10, CSA-35c
T Fluency, CT-11
T   of association, CaD-3, CaG-1, CSA-43c
T   tests, Gi-10-14
X Food, more fine, CaF-45, CM-22
X Football, CaF-22, CM-9, Factor Ia
R Foppish, etc., CaA-23
I Forest Service (Strong), Sg-16
R Forwardness, BrB-34, Factor Ei
Q Found fault with, CaE-46, SaB-46
R Frank vs. secretive, CaB-33, CaC-33, SaB-113
X Free time with people, CM-10
R Friendly, etc. CaA-8
R   etc., CaA-19, Factor A
Q   make easily, CaE-2, La-10, Mo-18, RTB-1, SaB-2, Factor So
R Frivolous, etc., CaA-4
R   vs. responsible, CaB-6, CaC-6, SaB-86, CSA-6c, Factor Pe

V A R I A B L E S

R Frustrated, etc., CaA-15
R Frustration, adjusting to, etc. CaA-27, Factor Ei
T Fusion lag, CT-10
Q Future, unconcerned about, GuB-27, RTC-27
X Games, social CaF-47
C Gang activity, HJ-3
Q General, activity (Guilford factor G), Lo-6, ThB-6
T classification test (Navy), CW-13
R emotionality, etc., CaA-20
R Generosity, BrB-10, Ts-10
I Generals vs. philosophers, CaE-48, SaB-48
R Genial, etc., CaA-22
R Gentle, etc., CaA-6, Factor Se
R Gets along with companions, Kr-22
Q Gifts, deciding on, St1-18, St2-40
C Gives in easily, WB-3, WH-6, Wi-6, WM-3, Factor Ma
X God, in touch with, CaF-44, CM-11, Factor Ir
J (Thurstone), Ch-3, Fe-3-4, Factor Re
R Good-natured, etc., CaA-9, Factor A
R vs. spiteful, CaB-12, CaC-12, SaB-92, CSA-1c, Factor A
R Good-tempered, etc., CaA-24
T Gottschaldt figures, CT-4
I Government vs. religion, CaE-60, CSA-32c, SaB-60
I vs. science, CaE-49, SaB-49
T Grades, BrA-26
T SB-20
T average, Kr-25
T college, SB-22, Factor G
T high school, SB-21, Factor G
C Grandoise notions, WH-33, Wi-33
I Gregarious, social (Guilford), To-25
R vs. self-contained, CaB-34, CaC-34, SaB-114, CSA-12c
Q Grouchy, Mo-24
Q Guilford-Martin Inventory, factors, BaA, BaB, Lo, No, ThB
I Guilford-Shneidman-Zimmerman Interest Survey, To-12-29

C Hallucinations, WH-45, Wi-45, Factor Ps
C Handicaps, no concern over, WH-42, Wi-42, Factor Hy
R Happy, etc., CaA-15
R Happy-go-lucky, BaB-10
Q GuB-24, GuC-15, RTC-24, RTD-15, Factor Rh
Q carefree, CaE-26, SaB-26, Factor Pe
R Hard, etc., CaA-6, Factors A, Se
R etc., CaA-9
R vs. kindly, CaB-19, CaC-19, SaB-99, Factor Se
T Hartshorne and May coordination, BrA-2, Factor Ho
C Headaches, CE-30, Ey-30
I Headlines on finance vs. religion, CaE-53, CSA-26c, CSA-28c, SaB-53
Q Health (Bell), Co-32, MD-9, Factor E
R Hearty, etc., CaA-31
R Hebephrenic, LW-15
Q Heckles speaker, BT-6, La-35, Factor Do
Q Help, gets out of difficulty without, St1-5, St2-45, Factor Ss
Q last to go for, St1-13, St2-55
X place to turn for, CM-13
X the distressed, CM-4, Factor Ib
C Helped, believes can't be, WB-11, WH-22, Wi-22, WM-11, Factor Ax
R Heterosexual contacts, lack of, LW-4
C Heterosexuality, HJ-20
T Hidden objects, CT-13
T Hidden word, CT-14
R High-strung, BaB-11
R etc., CaA-18
Q Himself, like to be by, La-21, Factor Gs
Q Home, Adjustment (Bell), Co-31, MD-8
X more time at, CaF-12
C unsatisfactory, CE-6, Ey-6
C Homosexual, HJ-18, 19
C acts, delusions of, WH-38, Wi-38
C demands, WH-52, Wi-52
R Honesty, Ts-12
J questionnaire, BrA-17
T see Overstatement, cheating, cursive miniature situation
I Hospitals, give to (compared), CaE-62, SaB-62, Factor Re
R Hostile, etc., CaA-13
R etc., CaA-24
I Housewife (Strong), CD-17, Factor Gs
I Humanistic (Texas), To-38
I Humanitarian (Thurstone), To-9
R Humor, BrB-24, RTA-7
Q Hurries, GuC-17, ReD-17
Q Hurt by remarks, RTB-2
I Husband who (comparison), CaE-59, SaB-59

VARIABLES

C Hypochondriacal, CE-17, Ey-17
R   vs. not, CaB-14, CaC-14, SaB-94, Factor E
C Hypochondriasis, CE-33, Ey-33, Factor E
Q   (MMPI), Co-3, Ab1-9, Ab2-9, CW-3, Ty-1, WL1-4, WL2-4, Factor E
Q Hypomania (MMPI), Co-11, Ab1-17, Ab2-17, CW-11, Ty-9, WL1-12, WL2-12, Factor Su
Q Hysteria, (MMPI), Co-5, Ab1-11, Ab2-11, CW-5, Ty-3, WL1-6, WL2-6, Factor E
Q   questionnaire, Be-2
C Hysterical, attitude, CE-28, Ey-28
C   conversion, CE-34, Ey-34

R Idealistic, etc., CaA-6, Factor Se
R   etc., CaA-14, Factor A
Q   and soft-hearted, CaE-45, SaB-45, Factor Se
IJ Ideals, Spranger types, La
C Ideas change, WB-1, WH-2, Wi-2, WM-1, Factor Ex
R   of influence, LW-13
Q   run through head, Mo-8, Factor Au
C   words without, WH-48, Wi-48
T Ideational Fluency, 2 tests, DT-8
T Identical numbers, DT-2
R Imaginative, etc., CaA-2
R   etc., CaA-34, Factor Se
R   sensitively vs. practical, CaB-29, CaC-29, SaB-109, CSA-6c, CSA-14c, CSA-15c
T   synesthesia, CT-3, CaG-41
T Immoderation of statement, CaG-42
Q Impatience, BC-5
R   vs. emotionally mature, CaB-24, CaC-24, SaB-104, CSA-2c, Factor Ei
T Improvement, complex task, CaD-39
R Impulsive, BaB-12, BrB-32, Factor Pe
R   etc., CaA-11
Q   rates self as, GuB-14, ReC-14, Factor Mp
Q   (Thurstone-Guilford factor), BaA-7
R Inarticulate, etc., CaA-23
R Incoherent, etc., CaA-3
R   etc., CaA-11
C Incontinent, WB-9, WH-16, Wi-16, WM-9, Factor Dt
R Independence, BrB-15
R Independent mind, etc., CaA-25
R Indifference, careless, LW-9, Factor Dt
R Indolent, etc., CaA-11
R   vs. orderly, CaB-20, CaC-20, SaB-100, Factor Pe
R Industrious, buddy and self rating, SB-5-6
I Industry, give to (compared), CaE-62, SaB-62, Factor Re
R Infantile, etc., CaA-13
R   etc., CaA-27, Factor Ei
J Inferiority, MD-2
C   feelings, HJ-11
Q   feelings (Guilford factor I), Lo-9, ThB-9
Q   feelings, troubled by, Mo-36
X Inflation, punish, CaF-23, Factor Fe
C Influence him, believes others, WB-15, WH-27, Wi-27, WM-15, Factor Ps
T Information, CaD-47, CSA-43c, Factor G
I   (Terman-Miles), FT1-2, FT2-2
R Inhibited, generally, etc., CaA-30
Q Inhibitory control, FK-28
R Initiative, Ho-1
T Inkblot, Gi-14
T   (Whipple), Kr-1-2
X Insane patient, avoid being, CaF-7, Factor Fe
R Insecure, etc., CaA-13
R Insidious onset, LW-7
C Insights, repudiates earlier, WH-50, Wi-50
Q Insomnia, CaE-31, GuC-16, RTD-16, SaB-31
C   WH-1, Wi-1
X Insurance, want more, CaF-26
R Integrated character, etc., CaA-28
R Intellectual, buddy and self rating, SB-7-8, Factor G
R   etc., CaA-12
Q   vs. athletic, BT-2, CaE-37, CSA-28c GuA-19, GuB-13, RTC-13, SaB-37, Factors Ia, Ip
R   vs. boorish, CaB-10, CaC-10, SaB-90, CSA-7c, CSA-14c, Factor Cu
C Intelligence, CE-38, Ey-38
R   BrB-20, Ts-2, Factor G
T   Kr-24
T   Burt's Northumberland Scale, Ho-16
R   etc., CaA-2, Factor G
R   quickness of, Ho-2, Factor G
  see also American C.E.P.E.
I Interest Maturity (Strong), Co-18, Factor Iw
R Interests, Ts-15
Q   change, La-39, Mo-15, Factor Pe
R   continuity of, Ho-5
R   defects of, LW-3
C   narrow, CE-9, Ey-9

VARIABLES

R narrow, LW-6
I (Terman-Miles), FT1-8, FT2-8, Factor Mf
R wide, etc., CaA-21
IJ spranger types, Lu
Q Interrupted, dislikes being, GuC-23, RTD-23
R Introspective, etc., CaA-33
R etc., CaA-34, Factor Se
Q GuB-26, RTC-26, Factor Ip
R vs. talkative, CaB-16, CaC-16, SaB-96, Factor Su
Q Introversion, (Bernreuter), Fn-3
Q (Guilford factors), Lo-1-2, No-1-2, ThB-1-2
Q Introvertive response (Terman-Miles), FT1-12, FT2-12
C Irritability, CE-26, Ey-26
R BrB-31
Q Isolated work, BT-8

R Jealous vs. not, CaB-22, CaC-22, SaB-102, CSA-8c
R Job attitude, Bo-9
T Jokes considered funny, CaD-21, CaG-10, CSA-41c
I Journalist (compared), CaE-55, SaB-55, Factor Se
I (Strong), CP-9, Sg-34, ThA-15
R Judgment, Bo-13
T with frustration, CaG-36
Q Just miserable, CaE-6, La-34, Mo-26, SaB-6

Q Keeps, head in excitement, RTB-6, Factor E
Q in background, GuA-18, GuB-12, La-38, Mo-7, RTC-12, Factor So
Q in touch, GuB-9, RTC-9, Factor A
R Kindness, etc., CaA-6, Factor Se
R etc., CaA-13
R vs. hard, CaB-19, CaC-19, SaB-99, Factor Se
R impulsive, RTA-10
R on principle, RTA-11, Factor A
Q K-scale (MMPI), WL1-2, WL2-2
I Kuder Preference Record, Co-21-30
R Languid vs. energetic, CaB-9, CaC-9, SaB-89, CSA-5c, Factor Su
Q Late for, appointment, St1-51, St2-24, Factor De
Q school, St1-1, St2-33, Factor De
C Laugh and smile, Ko-14
J Law, MD-4
Q abidance, BC-19
I Lawyer (compared), CaE-56, CSA-25c, SaB-56, Factor Ip
I (Strong), CD-11, CP-10, FH-12, Sg-33, ThA-6, Factors Ib,Il,Iw
Q Lead activities, GuA-3, Factor Ip
R Leader, takes part of, Kr-17
C Leadership, HJ-13
I Bus.-Polit. (Guilford), To-23
R Led easily, Kr-18, Factor Wi
Q Lend, hesitates to, GuB-4, RTC-4
T Letter, Grouping, DT-3c
T series, DT-3c
T star, DT-7c
I Librarian (Strong), CD-2, Factor Gs
Q Lie (MMPI), Co-1, Ab1-7, Ab2-7, CW-1, WL1-1, WL2-1, Factor Ho
C Lies or steals, WH-53, Wi-53, Factor Dt
Q Life, discusses problems of, CaE-36, SaB-36, Factor Ip
Q discusses questions of, GuB-22, RTC-22, Factor Ip
I thinking about vs. practical, CaE-63, SaB-63, Factor Ip
I Life Insurance Salesman (compared), CaE-58, SaB-58
I (Strong), CD-6, CP-11, FH-8, Sg-31, ThA-10, Factor Is
Q Limit acquaintances, GuA-2
I Linguistic (Guilford), To-14-15
I (Strong), Co-17
I (Thurstone), To-8
I Literary (Kuder), Co-26
R Lively, BaB-13
T Logical consistency, CaG-40
Q Loneliness, periods of, Mo-30, Factor Lo
Q Lonesome with others, BT-12, CaE-8, CSA-17, Mo-4, SaB-8, Factors Au, Lo
X Love, a beauty, CaF-31, CM-6, Factors If, Ix
X in novel, CaF-8
Q Low spirits, Mo-29, Factor Lo
R Lusty, etc., CaA-30

T Magic squares, Kr-6
Q Malicious, most people are, CaE-33, SaB-33
T Maller Self-Marking, BrA-1, Factor Ho
I Manager (compared), CaE-51, CSA-25c CSA-26c, CSA-30c, SaB-51, Factor Se

VARIABLES

I Manipulative, Constructive (Texas), To-40
I   Mechanical (Guilford), To-18
Q Manners scrupulously correct, CaE-24, CSA-23, SaB-24, Factor Sf
C Married, CE-7, Ey-7
Q Masculinity, (Guilford factor M),Lo-8, ThB-8
I   (Kuder), Co-30, Factor Mf
Q   (MMPI), Co-7, Ab1-13, Ab2-13, CW-7, Ty-5, WL1-8, WL2-8, Factor Mf
I   (Strong), CD-18, Co-20, Sg-37, To-1, Factors Il, Mf
I   (Terman-Miles), CaG-38, FT1-1-12, FT2-1-12
Q   (Thurstone-Guilford factor), BaA-4
I Mathematician (Strong), CP-22, Sg-6
I Mathematics-Science Teacher (Strong), CD-13, Sg-14, Factor Il
R Mature, etc., CaA-3
R   etc., CaA-13
R Mature emotionally, etc., CaA-17
R   etc., CaA-27
R   vs. demanding, CaB-24, CaC-24, SaB-104, CSA-2c, CSA-6c, Factor Ei
T Maze, speed, CaG-60
T   with fear, CaG-59
C Membership, none, CE-8, Ey-8
T Mechanical, Aptitude (Navy), CW-15, Factor Mf
I   (Brainard), To-45
T   Knowledge (Navy), CW-16
I   (Kuder), Co-21, Factor Mf
I   (Lee-Thorpe), To-32
I   Manipulative (Guilford), To-18-19
I   Technical (Texas), To-39
X   things, learn, CaF-25
Q Meditative state, GuB-16, RTC-16, Factor Ip
R Meek, etc., CaA-35
R Melancholic, etc., CaA-32
C Membership in groups, CE-8, Ey-8, Factor G
T Memory, 2 tests, DT-1
C   faults, WH-46, Wi-46, Factor Ex
T   immediate, CaD-44
Q   poor, CaE-13, SaB-13, Factor Sc
T   purposeful, CaD-38, CaG-12, CSA-38c CSA-44c
R Mental Activity, Ho-4, Factor G
T Mental set performance, CaG-23
I Mercantile, Bus.-Polit. (Guilford), To-22, See also Commerce
R Merrill-Palmer Personality Rating Scales, Ri-1-9
C Metabolic rate, CaG-50
C   change, CaG-51
Q Meticulousness, BC-14, Factor Me
R Mild, etc., CaA-7, Factor Do
R   vs. egotistic, CaB-15, CaC-15, SaB-95, CSA-1c, CSA-3c
X Militarism, protect from, CaF-9
Q Mind, cannot make up, BT-14, Mo-37
Q   makes up for himself, St1-44, St2-9, Factor Ss
Q   wanders, Mo-20
I Minister (compared), CaE-55, SaB-55, Factor Se
I   (Strong), CP-12, Sg-22, ThA-7, Factor Iw
Q Minnesota, Inventories of Social Attitudes, MD-12-13
Q   Multiphasic Inventory, Ab1-7-17, Ab2-7-17, Co-1-11, CW-1-11, Ty-1-15, WL1-1-12, WL2-1-12
J   Scale for Survey of Opinions, MD-1-7
T Mirror drawing, CaD-35
T   and emotion, CaD-28, CSA-36c
T   carefulness, CaG-58
T   improvement, CaG-57
R Misanthropic, etc., CaA-22
Q Miserable, just, CaE-6, La-34, Mo-26, SaB-6, Factor Cd
C Misunderstood, fears, WH-23, Wi-23
R Mixes readily with others, Kr-21
Q Money, ideas for making, St1-56, St2-20
Q   reliable about, St1-50, St2-26
Q   questionnaire, BC-16
C Mood, abrupt changes in, WH-39, Wi-39
Q   changes, GuA-23, La-26
Q   changes without cause, Mo-38, RTB-10, Factor Cd
R   oscillating vs. permanent, RTA-2
Q Moods, pleasant, La-36
Q   powerful, CaE-10, CSA-30c, SaB-10
Q Mooney Problem Check List, ML-1-10
J Morale, MD-1
Q Motives of others, studies, BT-5, CaE-35, GuA-12, GuB-7, RTC-7, SaB-35, Factor Ip
C Movement, constant, WH-7, Wi-7
CT   measures, Fr-11-16
Q Moves quickly vs. slow, CaE-34, SaB-34, CSA-27c, Factor Su
X Movies and plays, CaF-30, CM-5, Factors If, Ix

VARIABLES

T Multiplication, DT-4c
C Muscular tone, CE-29, CaG-54, Ey-29
X Music, listen to, CaF-11, CM-15, Factor Cv
I Musical (Kuder), Co-27
I   (Thurstone), To-11
I Musician (Strong), Sg-23
T Myokinesis, CaD-32
T   drift, CaG-33
R Narrow, etc., CaA-21
R Natural, etc., CaA-19, Factor A
R   etc., CaA-23
I   (Lee-Thorpe), To-31
I   outdoor (Guilford), To-20
X Nature and country, CaF-40
T Naval Basic Battery, CW-13-17
Q Navy Enlisted Personal Inventory, CW-19-20
R Neatness, Ts-13
R   in class, BrB-18
T Necker Cube, CT-5, CaD-19, CSA-33c
C Negativism, HJ-10
Q Nervous, consider self, Mo-5, Factor E
Q   (Guilford factor N), Lo-10, ThB-10
C   habits, Ko-1-11, Factor Mf
Q   habits, GuC-9, RTD-9, Factor Ne
T   movements, Fr-24
R   vs. calmness, Ts-4
R Neurasthenic, etc., CaA-29
Q Neurotic, FK-25
R   etc., CaA-5
R   etc., CaA-16, Factor E
R   fatigue vs. not, CaB-30, CaC-30, SaB-110, CSA-7c, CSA-9c, Factor E
Q   tendency (Bernreuter). Fn-1
Q New ways for doing tasks, St1-36, St2-21
Q News, receive bad alone, BT-10, Factor Ip
C Night, Staying out at, HJ-23
C Non-participation, Ko-21
T Nonsense syllables, CT-15
T Northumberland Scale of Intelligence, Ho-16
J Nudity (compared), CaE-69, CSA-31c, SaB-69, Factors Cv, Se
T Number, 2 tests, DT-4
T   (PMA), Ab1-1, Ab2-1
I Numerical, Office Work (Guilford), To-29, Factor Ic
I Nurse (Strong), CD-14, Factor Gs

R Obedience, Kr-15, Factor De
R   in class, BrB-8, Factor De
Q Objectivity (Guilford factor O), Lo-11, ThB-11
C Obsessional, CE-18, Ey-18
C Obsessive thoughts, WH-4, Wi-4
Q Obstinacy, BC-10
R Obstructive vs. cooperates, CaB-1, CaC-1, SaB-81, CSA-1c, Factor A
I Occupational Level (Strong), Co-19, Sg-36, Factors Ib, Il
I Office Manager (compared), CaE-52, CSA-30c, SaB-52, Factor Is
I Office work, Clerical and Numerical (Guilford), To-28-29
I Offic Worker (Strong), CD-16, CP-20, FH-10, Sg-26, Factors Gs, Il
Q One-track mind, CaE-3, CSA-26c, SaB-3
R Open, etc., CaA-19, Factor A
Q Opinions, dislike changing, GuA-20
C   exceptional to science, WH-44, Wi-44, Factor Ps
T   immaturity of, CaD-48, CaG-14, CSA-45c
C Oppositional, WB-20, WH 55, Wi-55, WM-20, Factor Dt
Q Optimistic, CaE-44, SaB-44
R   etc., CaA 32
Q Orderliness, BC-23, Factor Me
R   BrB-21
R Orderly, vs. indolent, CaB-20, CaC-20, SaB-100, Factor Pe
C   rigidly, WH-30, Wi-30
C Organic, basis for complaints, no, WB-13, WH-25, Wi-25, WM-13, Factor Hy
C   pathology from emotions, WB-16, WH-29, Wi-29, WM-16, Factor Hy
C Organized badly, Ce-12, Ey-12, Factor Pc
R Organizing ability, Bo-12
Q Organizing clubs, La-27, Factor So
R Oscillating vs. permanent mood, RTA-2, Factor Pe
T Oscillation, CaD-9, CaG-9, CSA-34c, CSA-41c, CSA-46c
T Otis Intelligence Test, BrA-29-40
T Otis S-A General Ability, Gi-5
R Out-going, etc., CaA-14, Factor A
Q Outspoken, RTB-8
T Overstatement, books, CaD-11
T   topics, BrA-4, Factor Ho

Q Paranoia (MMPI), Co-8, Ab1-14, Ab2-14, CW-8, Ty-6, WL1-9, WL2-9
J Pacifism (Thurstone), Ch-4, Fe-1-2, Factor G
C Pain without cause, CE-23, Ey-23

VARIABLES

X Paintings, like, CaF-3, Factor Cv
Q Paranoia (MMPI), Co-8, Ab1-8, Ab2-8, CW-8, Ty-6, WL1-9, WL2-9, Factor Ho
R Paranoid, etc., CaA-24
C Parents, abnormality in, CE-5, Ey-5, Factor Pc
X   advice, wants, CaF-5, CM-12, Factors If, Ir
X   make comfortable, CaF-43, CM-3, Factor If
Q Particular about dress, GuA-6, Factor Sf
Q Parties, enjoys, CaE-19, La-12, SaB-19, Factors Gs, Sf
R Patience, Ts-14
R   etc., CaA-26, Factor Ei
Q   questionnaire, BC-5
Q People, are stimulating, BT-18, Factor Gs
Q   be with, BT-25, La-24, Factor Gs
I   famous (Terman-Miles) FT1-11, FT2-11
R Pep, Ts-1
T Perceptual Speed, Identical Numbers, DT-2
T   (PMA), Ab1-6, Ab2-6
R Permanent vs. oscillating mood, RTA-2
C Persecuted, feels, WB-14, WH-26, Wi-26, WM-14, Factor Ps
R Perseverance, BaB-14, Ho-6, Factor Pe
Q   CaE-22, SaB-22, Factor Pe
R   vs. quitting, CaB-17, CaC-17, SaB-97, CSA-10c, Factor Pe, See also Persist.
T Perseveration, CaD-2, CaG-2, CSA-37c
T   Add-subtract, BrA-23
T   (Cattell), RTB-11
T   creative effort motor, CT-2
T   s and v, BrA-21-22, Factor Wi
T $\pm \infty$ and $\int Z$, Gi-15-16
C Persistence, Ko-31
R   Ts-11
T   adding, BrA-6, Factor Pe
R   at lessons, Kr-8
R   at task, Kr-7
R   in school work, BrB-1
T   picture inhibition, BrA-9
T   stories, BrA-7
R   vs. changeability, RTA-19
R   with obstacles, RTA-18, See also Perseverance
R Personal, appearance, Bo-2, Factor Me
I   assistance (Guilford), To-26-27
I Personal Service (Brainard), To-43
I   (Guilford), To-26
R Personality, Bo-1, Factor A
Q   wanting a pleasing, ML-2, Factor Sc
I Personal-Social (Lee-Thorpe), To-30
I Personnel, Worker, (compared), CaE-51, CSA-25c, CSA-26c, CSA-30c, SaB-51, Factor Se
I   Manager, (Strong), CP-13, Sg-18, ThA-16, Factor Iw
Q Perspires in difficult situations, GuC-1, RTD-1
Q Persuade others, GuA-17
I Persuasive, (Kuder), Co-24, Factor Is
I   Social (Guilford), To-24
I   (Thurstone), To-7
Q Pessimism, BC-1
T Philadelphia Mental Ability Test, Kr-24, Factor G
I Philosophers vs. generals, CaE-48, SaB-48
R Phlegmatic, etc., CaA-18
R   vs. emotional, CaB-13, CaC-13, SaB-93, CSA-7c, CSA-9c, Factor E
C Phobias, WH-15, Wi-15
I Physical Science (Thurstone), To-2
I Physician (Strong), CD-4, CP-6, FH-11, Sg-4, ThA-18, Factor Is
I Physicist (compared), CaE-47, CSA-19c, SaB-47, Factor Is
I   (Strong), CP-21, Sg-7
T Picture inhibition, BrA-8, Factor Pe
T   persistence, BrA-9, Factor Pe
J Pity (Terman-Miles), FT1-6, FT2-6, Factor Se
R Placid vs. worrying, CaB-26, CaC-26, SaB-106, CSA-8c, CSA-15c, Factor E
Q Plan carefully, La-3, Factor Mp
Q   parties, asked to, St1-29, St2-52
Q   trips, St1-59, St2-11
C Plans, engrossed in, WH-17, Wi-17
C   unable to stick to, WH-21, Wi-21
T Planning, CaG 28
Q   alone, BT-11, La-18, CaE-21, CSA-29c, SaB-21, Factor Ss
Q   enjoys, St1-19, St2-49
C Play alone, Ko-17
C   cooperative, Ko-20
C   parallel, Ko-19
R Pleasure activity, RTA-17
I Poetry, CaE-74, CSA-20, SaB-74
R Poise vs. easily upset, CaB-8, CaC-8, SaB-88, CSA-4c, CSA-7c, Factor Se
I Policeman (Strong), Sg-15, Factor Il
R Polished, etc., CaA-3
R   vs. clumsy, CaB-21, CaC-21, SaB-101 CSA-14c, CSA-16c, Factors Cu,Sf
I Political (Allport), Du-5, FH-5, Factor Ib

VARIABLES

X Politics, left vs. right, CaF-20
IJ   interests, ideals, preferences, beliefs, Lu-17-20, Factor Ib
X   take part in, CaF-35
Q Ponders over past, GuB-19, RTC-19
R Popularity, Ho-11, Ts-5
Q Position, changes while sitting, GuC-2, RTD-2
C Pout and sulk, Ko-13
R Practical vs. sensitively imaginative, CaB-29, CaC-29, SaB-109, CSA-6c, CSA-14c, CSA-15c, Factor Cv
Q   vs. soft-hearted, CaE-45, SaB-45, Factor Se
Q   vs. theorizer, CaE-40, GuB-8, RTC-8, SaB-40
I   vs. thinking about life, CaE-63, SaB-63
Q Praised, work when, GuA-10
R Predatory, etc., CaA-7, Factor Do
IJ Preferences in people, Spranger types, Lu
Q Prejudice (MMPI), Ty-12, Factor Pc
I President (Strong), Sg-35
Q Pressey X-O: Blames, Be-8
T   Conscientiousness, BrA-24
Q   Likes, Be-10
Q   Worries, Be-9
B Primary Mental Abilities, Ab1-1-6, Ab2-1-6
I Printer (Strong), Sg-13, Factor Il
C Problems, believes he has no, WH-34, Wi-34
Q   enjoys thinking out, GuB-25, RTC-25, Factor Iz
I Production Manager (Strong), Sg-10
I Professional (Brainard), To-46
X Proficient, want to be, CaF-6, CM-29, Factor Ib
J Progressive society vs. not, CaE-65, SaB-65
J Prohibition (compared), CaE-67, CSA-28c, SaB-67
J   (Thurstone), Ch-6
R Promises, keeps, Kr-10, Factor De
R Prompt starter, BaB-15
R Property rights, respect for, Ri-3
X Protection from A-bomb, CaF-2, CM-18, Factor Fe
I Protestant leaders vs. market, CaE-53, SaB-53, Factor Ir
Q Psychasthenia (MMPI), Co-9, Ab1-15, Ab2-15, CW-9, Ty-7, WL1-10, WL2-10, Factor Pc
C Psycho-galvanic reflex, deflection, CaD-37, CaG-22, CSA-40c, Ko-34
C   frequency, CaD-41
C   level, Ko-32, 33, Factor Mf
C   recovery, Ko-35
C   upward drift, CaG-56
I Psychologist (Strong), CP-14, Sg-2, ThA-8, Factor Is
R Psychopathic, etc., CaA-17
Q   Deviate (MMPI), Co-6, Ab1-12, Ab2-12, CW-6, Ty-4, WL1-7, WL2-7, Factor Pc
R Psychosis, long duration of, LW-8
T Pulse rate, increase, CaG-62
Q Punctuality, BC-12
R   Bo-3, Ts-7, Factor De
I Purchasing Agent (Strong), CP-15, Sg-27, ThA-14, Factor Il
T Puzzle mastery, Kr-3
Q Puzzles, likes solving, GuB-23, RTC-23, Factor Iz
Q   likes solving by himself, St1-57, St2-27

R Quarrelsomeness, BrB-30, Factor Ei
Q Quick in actions, GuC-18, RTD-18, Factor Su
R Quick worker, BaB-16
R Quick-thinking, buddy and self-rating, SB-9-10
R Quietness, etc., CaA-21
Q   in company, GuA-27, La-11, Factor So
R   vs. boisterous, Ts-18
R Quitting vs. persevering, CaB-17, CaC-17, SaB-97, CSA-10c, Factor Pe

J Racial characteristics, CaE-73, SaB-73
Q Radical beliefs, BT-19
Q Rattled easily, CaE-5, CSA-27c, GuA-35, La-33, SaB-5, Factor Ne
C Reaction time, CaD-4, CaG-4, CSA-46c
T   false reactions, CaD-43
CT   measures of, FK-18,21,23
T   ratio, CaD-22, CaG-5, CSA-46c
T   slowing, CaG-48
T Reactions, erroneous complex, CaG-47
Q Read, too little chance to, ML-8
Q   vs. experience, GuA-4, GuB-3, RTC-3
X   want to more, CaF-38

VARIABLES

I Reading, preferences, questionable, BrA-13, CaD-17, CaG-11, CSA-39c
T   speed, with interest, CaG-37
Q   vs. discussion, BT-22
I Real Estate Salesman, (compared), CaE-55, SaB-55
I   (compared), CaE-56, CSA-25c, SaB-56, Factors Ip, Se
I   (Strong), CP-16, Sg-30, ThA-17, Factor Is
R Realistic, etc., CaA-10, Factor E
R Reality, face, Ri-4
T Reasoning, 2 tests, DT-3
T   (PMA), Ab1-5, Ab2-5, Factor Pc
T Recall, emotional, CaG-32
T   of emotional words, CaD-24, CSA-36c
T   ratio, CaD-36, CaG-18
T   with distraction, CaG-34
T   with fear, CaG-31
T   with frustration, CaG-35
T   with humiliation, CaG-63
Q Recreation, not enough, ML-9
R Refinement, BrB-13
Q Reflective (Thurstone-Guilford factor), BaA-1
C Refuse and ignore, Ko-29
Q Relaxes, easily, GuB-29, RTC-29
Q   sitting or lying down, GuC-21, RTD-21
R Reliability, BrB-4, Factor De
Q   questionnaire, BC-18
R Relied on to do chores, Kr-12, Factor De
X Religion, increase, CaF-19, CM-14, Factor Ir
J   vs. evolution, CaE-66, CSA-22, SaB-66
I   vs. government, CaE-60, CSA-32c, SaB-60, Factor Ir
R Religiousness, BrB-12, Ts-6
I   (Allport), Du-6, FH-6, Factor Ib
IJ   interests, ideals, preferences, beliefs, Lu-21-24, Factor Ir
T Remember easier tasks, CaG-26
Q Remorse, burdened by sense of, Mo-9, Factor Au
X Reputation, want, CaF-28, CM-26, Factor Ib
R Reserved, etc., CaA-4
R Resourcefulness, Bo-6
R Respectfulness, BrB-9
R Response to reproof, BrB-7
R Responsible vs. frivolous, CaB-6, CaC-6, SaB-86, CSA-6c, Factor Pe
Q Responsibility (MMPI), Ty-14
R Responsive, etc., CaA-22
X Restaurants, more, CaF-24, Factor Ix
R Restlessly emotional, etc., CaA-26, Factor Ei
R Retiring, etc., CaA-21
Q Rewrites letters, G A-33
Q Rhathymia (Guilford factor R), Lo-5, DT-13, No-5, ThB-5
T Riddles, CT-7, CaD-40, CSA-43c
R Rigidity, etc., CaA-8
R   etc., CaA-16, Factor E
Q   questionnaire, BC-24
R   vs. adaptability, CaB-23, CaC-23, SaB-103
C Routines, disrupts, WH-11, Wi-11
Q Rushes, GuC-12, RTD-12, Factor Su
Q   vs. slow, CaE-34, SaB-34, CSA-27c, Factor Su

Q Sadism, BC-8, Factor Do
X Salary, increase, CaF-18, CM-28, Factors Ib, If
R Sales ability, Bo-11
I Sales Manager (Strong), Sg-29
Q Salesman, get rid of, La-51, Factor Sc, see Real Estate, Life Insurance
C Salivary pH, CaG-53
T Same or Opposite, DT-5c
Q Say things on spur of moment, La-4, Factor Mp
R Scared, etc., CaA-33
Q Schedule, arrange own, St1-7, St2-53
C Schizoid, CE-16, Ey-16, Factor Pc
R   LW-2
R   etc., CaA-14, Factor A
Q Schizophrenia (MMPI), Co-10, Ab1-16, Ab2-16, CW-10, Ty-8, WL1-11, WL2-11, Factor Pc
C Schneider index of health, CaG-49
I School Superintendent (Strong), Sg-21
I Schoolman (Strong), CP-17
I Science, give to (compared), CaE-62, SaB-62, Factor Re
J   guide society by, CaE-68, SaB-68
X   know more, CaF-16, CM-16, Factor Cv
I   vs. government, CaE-49, SaB-49

VARIABLES

I Sciences (Lee-Thorpe), To-35, Factor Is
I Scientific (Brainard), To-48, Factor Is
I Scientific (Guilford), To-16-17, Factor Is
I   (Kuder), Co-23
I   research, object of, CaE-50, SaB-50
I   (Strong), Co-12
R Seclusive, etc., CaA-31
Q Scrupulously correct manners, CaE-24, CSA-23, SaB-24, Factor Sf
C Seclusiveness, HJ-25
I Secretary-Stenographer (Strong), CD-15, Factor Gs
R Secretive vs. frank, CaB-33, CaC-33, SaB-113
Q Secretly talking about you, La-2
R Seeks company, BaB-17
R Self assertive, etc., CaA-1, Factor Do
R Self-centered, etc., CaA-27, Factor Ei
Q Self-confidence, Mo-32, Factor Sc
R   BaB-18
T   CaD-31
Q   about abilities, La-49, Mo-39, Factor Sc
Q   about success, CaE-14, CSA-29c, SaB-14, Factor Sc
Q   questionnaire, BC-6
Q   (Thurstone-Guilford factor), BaA-8
Q   worries about lack of, ML-3, Factor Sc
R Self-consciousness, BrB-16, Ho-10
Q   about appearance, Mo-34
Q   (Flanagan-Bernreuter), Gi-3
Q   reciting, Mo-25, Factor Sn
Q   with strangers, La-46, Factor Sn
Q   with superiors, La-42, Mo-31
R Self-control, BrB-6
R   etc., CaA-16, Factor E
R Self-effacing, etc., CaA-7, Factor Do
R   etc., CaA-26, Factor Ei
R Self-improvement, Bo-14
T Self-Marking, lie, BrA-1, Factor Ho
Q Self-pity, RTB-5, Factor E
Q Self-reliant, St1-3, St2-43, Factor De
X Self-respect, CaF-13, CM-25
Q Self-sufficiency, (Bernreuter), Fn-2, Factor Ss
R   vs. attention-getting, CaB-3, CaC-3, SaB-83, CSA-2c
Q   (Woodworth), BrA-28
Q Sells things, GuA-34, Factor Mf
R Sense of Humor, Ts-21
R Sensitively imaginative vs. practical, CaB-29, CaC-29, SaB-109, CSA-6c, CSA-14c, CSA-15c, Factor Cv
C Sensitiveness, HJ-14
R   etc., CaA-33
R Sentimental, etc., CaA-22
R Sentiments, accepts, RTA-15
Q Seriously, takes things, ML-6
R Set, etc., CaA-34, Factor Se
C Sex, CaE-80, CaG-39, CSA-47, Gi-17, GuA-36, Ko-38, SaB-80, Factors Mf, Se
X   appeal, likes, CM-7, Factor Ix
Q   drive, BC-21, Factor Ix
Q   free (compared), CaE-69, SaB-69, Factors Cv, Se
R   interest, CaB-32, CaC-32, SaB-112, CSA-12c, CSA-13c
Q   predation, BC-11, Factor Ix
C Sexual anomalies, CE-25, Ey-25
C   beliefs unjustified, WH-3, Wi-3
J   life (compared), CaE-69, CSA-31c, SaB-69

C Shouts and sings, WB-8, WH-14, Wi-14, WM-8, Factor Ma
R Shut-in personality, LW-1
R Shyness, Kr-16
R   etc., CaA-31
Q   free of, CaE-1, CSA-18, CSA-30c, SaB-1, Factor So
Q   (Guilford factor S-), Lo-1, No-1, ThB-1
Q   troubled with, Mo-12, Factor So
R   vs. composed, CaB-28, CaC-28, SaB-108, CSA-8c, CSA-11, CSA-13c, Factor So
R Silent vs. talkative, CaB-16, CaC-16, SaB-96, CSA-5c, CSA-10c, Factor Su
R Silly, etc., CaA-3
C   swaggering, Ko-15, Factor Mf
T Similies, DT-7c
T Similarities (Otis), BrA-35, Factor G
R Simple, etc., CaA-12
R Simple-hearted, etc., CaA-35
I Sims, Biographical Inventory, To-49
I Sixteen P. F. Test, SaB
C Skilled, CE-2, Ey-2
T Slang "A" and "C", BrA-10-11
X Sleep, later, CaF-37
X   more, CaF-10
Q   not enough, ML-7
Q   walking and talking, CaE-42, CSA-24, SaB-42, Factor E

VARIABLES

- Q Slow and deliberate, GuA-24, GuC-5, La-6, RTD-5, Factor Su
  - Q or rush, CaE-34, CSA-27c, SaB-34, Factor Su
- R Smart, etc., CaA-35
- R Smug, etc., CaA-34, Factor Se
- R Sociability, BrB-25, Ri-6, Ts-3
  - R buddy and self rating, SB-15-16
  - R etc., CaA-31
  - Q (Thurstone-Guilford factor), BaA-2
  - R vs. self-contained, CaB-34, CaC-34, SaB-114, CSA-12c, CSA-13c
- I Social activity (Guilford), To-24-25
- Q Social Adjustment, (Bell), Co-33
  - Q (Woodworth), BrA-27
- Q Social affairs, enjoy, La-16
  - Q prominent in, RTB-7, Factor So
- I Social (Allport), Du-4, FH-4
- R Social, anti-, etc., CaA-14
- Q Social, (Bell), Co-33, MD-10
- Q Social Extraversion (Guilford factor S), Lo-1, DT-9, No-1, ThB-1
- R Social gatherings, fond of, RTA-9
- IJ Social interests, ideals, preferences, beliefs, Lu-13-16, Factor Iw
- Q Social introversion (MMPI), Ty-10, Factor Pc
- Q Social preferences, behavior (Minn.), MD-12-13
- J Social regulation, CaE-70, SaB-70
- I Social Science Teacher (compared), CaE-51, CSA-25c, CSA-26c, CSA-30c, SaB-51, Factor Se
  - I (Strong), CD-10, Sg-20, Factor Iw
- I Social Service (Kuder), Co-28
- I Social vs. art, CaE-61, CSA-29c, SaB-61
- I Social Welfare (Guilford), To-27
  - (Strong), Co-14, Factor Iw
- I Social Worker (Strong), CD-7
- R Socially at ease, BaB-19
- Q Soft-hearted, idealistic, CaE-45, SaB-45, Factor Se
  - R vs. hard, CaB-19, CaC-19, SaB-99, Factor Se
- R Solid, etc., CaA-33
- Q Solitariness (Flanagan-Bernreuter), Gi-4, Factor Ss
- T Space (PMA), Ab1-3, Ab2-3
- Q Spare time, finds work in, St1-28, St2-37
- Q Speak in public, GuA-21, Mo-33, Factor Sn
- C Speech, stilted, WH-51, Wi-51
  - C variation in rate of, WB-18, WH-36, Wi-36, WM-18, Factor Ex
  - Q vs. writing, GuA-1
  - T mechanical, CaD-6, CSA-33c
  - T of judgment, CaD-5, CaG-3, CSA-38c
  - T see also Perceptual S., Reading S.
- R Spiteful, etc., CaA-19, Factor A
  - R vs. good-natured, CaB-12, CaC-12, SaB-92, CSA-1c, Factor A
- I Spouse: spiritual or successful, CaE-59, SaB-59, Factor Ir
- I Spranger's types, see Allport-Vernon
- R Sport, good, Ts-17
- Q Spur of moment, says things on, La-4, Factor Mp
- R Stability, BrB-11
- R Stable, etc., CaA-28
  - R emotionally vs. changeable, CaB-2, CaC-2, SaB-82, CSA-9c, CSA-10c, Factor Pe
- Q Stage fright, Mo-1, Factor Sn
- Q Startled easily, CaE-30, GuC-7, RTD-7, SaB-30, Factor Ne
- J State, subservience to (compared), CaE-69, SaB-69, Factors Cv, Se
- R Steady worker, BaB-20, Factor Pe
- C Stealing, HJ-1, 2, 24
- C Steals or lies, WH-53, Wi-53, Factor Dt
- J Sterilization (compared), CaE-67, CSA-28c, SaB-67
- R Stoic, etc., CaA-4
- Q Stop and think, GuB-20, GuC-8, RTC-20, RTD-8, Factors Mp, Rh
- Q Strange place, likes, St1-35, St2-17
- J State, good of, (compared), CaE-69, CSA-31c, SaB-69
- Q Status (MMPI), Ty-11
- Q Stranger, start conversation with, GuB-2, La-25, Mo-2, RTC-2
- Q Stray thoughts, CaE-12, CSA-31c, SaB-12
- C Stress caused by, army life, CE-36, Ey-36
  - C bombardment, CE-35, Ey-35
  - C domestic problems, CE-37, Ey-37
- I Strong Vocational Interest Blank, CD-1-18, Co-12-20, CP-1-23, FH-7-14, Sg-1-37, To-1, ThA-1-18

V A R I A B L E S

R Strong-willed, etc., CaA-11
R Stubborn, LW-10, Factor Dt
R Stupid, etc., CaA-2, Factor G
C Submissiveness, HJ-5
Q   Ho-14
R   self, etc., CaA-1
R   vs. assertiveness, CaB-4, CaC-4, SaB-84, CSA-4c, CSA-7c
J Success and helpfulness, BrA-16
Q Successful, wonder about being, ML-1, Factor Sc
T Suffixes, DT-6c
T Suggestibility, BrA-5, Factor Wi
T   body-sway, CaD-26, CaG-21, CSA-37c
Q Suggestions, made use of, St1-41, St2-23
C Suicide attempts, WH-40, Wi-40, Factor Ax
J Sunday observance (compared), CaE-64, CSA-31c, SaB-64, Factor Re
R Superstitious, etc., CaA-19, Factor A
R Surly, etc., CaA-9, Factor A
R   when punished, Kr-13
Q Suspicious, of motives, La-[illegible], RTB-3
R   vs. trustful, CaB-11, CaC-11, SaB-91, CSA-8c
R Sympathetic, BaB-21, BrB-19, Factor A
R Sympathy, looks for, BrB-28, Factor Ei
T Synesthesia, imaginative, CT-3, CaG-41

R Tact, RTA-16
R   etc., CaA-13
R Talkative, BaB-22
Q   CaE-29, GuC-22, RTD-22, SaB-29, Factors Rh, So
R   etc., CaA-33
R   vs. silent, CaB-16, CaC-16, SaB-96, CSA-5c, CSA-10c, Factor Su
C Talks to self, Ko-24
R Tank performance, CW-18
X Taxes, less, CaF-4
I Teacher (compared), CaE-55, SaB-55, Factor Se
I   (Strong), CD-9, FH-7, ThA-9, Factor Iw
I   English (Strong), CD-8
I   Mathematics-Science (Strong), CD-13, Sg-14
I   of social science (compared), CaE-51, CSA-25c, CSA-26c, CSA-30c, SaB-51, Factor Se
I Teacher (compared)
    Social Science (Strong), CD-10, Sg-20, Factor Iw
Q Tears, moved to easily, La-28, Factor E
R Technical ability, Bo-10
I Technical (Strong), Co-13, Factor Is
C Temper tantrums, HJ-7, WB-6, WH-12, Wi-12, WM-6, Factor Ma
T Tempo, CaD-18, CaG-7
Q Tenseness uses up energy, CaE-32, CSA-27c, SaB-32, Factor E
I Terman-Miles: Masculinity, CaG-38, FT1-1-12, FT2-1-12
T Theme, DT-8c
I Theoretical, (Allport), Du-1, FH-1, Factor Is
IJ   interests, ideals, preferences, beliefs, Lu-1-4, Factor Is
I   Scientific (Guilford), To-17
Q Theorizer vs. practical, GuB-8, RTC-8
Q Thinking Introversion (Guilford factor T), Lo-2, DT-10, No-2, ThB-2
R Thoroughness, Bc-4, Factors De, Me
R Thoughtfulness, Ts-20
R   etc., CaA-4
X Thoughts, and reveries, enjoy, CM-24
Q   troubled by useless, CaE-12, SaB-12, Factor Sc
R Thrifty, etc., CaA-34, Factor Se
J Thurstone, Attitude Scales, Ch-2-6, Fe-1-12
I   Interest Schedule, To-2-11
Q   Neurotic Inventory, Mo-1-39
Q   Personality Schedule, Gi-2
R Tight-fisted, etc., CaA-19, Factor A
X Time, more for thoughts, CaF-21
R Timid, etc., CaA-30
R Tolerant, etc., CaA-7, Factor Do
T Topics, DT-8c
Q Touchy, Mo-22
R Tough, etc., CaA-33
Q Travel, alone or guided, CaE-20, SaB-20, Factor Ss
Q   alone or helped, BT-7, St1-60, St2-22
X   less dangerous, CaF-15
X   want to, CaF-32, Factor Ix
C Tremor, CE-24, Ey-24
Q Troubles, faces alone, St1-10, St2-31, Factor Ss
C Truancy, HJ-16
R Trusted on errands, Kr-11

V A R I A B L E S

R Trustworthiness, RTA-13
R Trustful, etc., CaA-24
R   vs. suspicious, CaB-11, CaC-11, SaB-91, CSA-8c
R Truthfulness, BrB-3, Kr-19
R Twenty-Two-Trait Personality Rating Scale, Ts-1-22
T Two-Hand Coordination, CW-12, CaD-20, CaG-20, CSA-44c
R Tyrannical, etc., CaA-8

Q Unconcerned what others think, GuB-6, RTC-6
C Unemployment, CE-3, Ey-3, Factor G
Q Unfinished job, bothered by, La-41, Factor Ne
R Unrealistic, etc., CaA-28
R Unscrupulous vs. conscientious, CaB-27, CaC-27, SaB-107, CSA-3c
Q Upbraids workman, La-31, Factor Do
Q Ups and downs, GuA-23, La-26, Factor Cd
Q   no cause, Mo-38, RTB-10, Factor Cd
R Upset easily vs. poise, CaB-8, CaC-8, SaB-88, CSA-4c, CSA-7c, Factor Se
Q Useless thought bothers, Mo-27

J Vaccination (compared), CaE-67, CSA-28c, SaB-67
I Vacuum Cleaner Salesman (compared), CaE-47, CSA-19c, SaB-47, Factor Is
I   (Strong), CP-18
Q Validity (MMPI), Co-2, Ab1-8, Ab2-8, CW-2, WL1-3, WL2-3
Q Variability, FK-30
T   adding, BrA-12, Factor Pe
T   of Otis scores, BrA-30
Q Variety in job, CaE-28, CSA-25c, CSA-32c, SaB-28, Factor Pe
T Verbal, Comprehension, 2 tests, DT-5
T   (PMA), Ab1-2, Ab2-2
T   Versatility, 2 tests, DT-7
R Vigorous, psychophysically, etc., CaA-29
Q   (Thurstone-Guilford factor), BaA-4
R Vindictive, etc., CaA-8
Q Visceral disturbance, FK-29
J Vivisection (compared), CaE-69, CSA-31c, SaB-69, Factor Se
T Voice, level measures, FK-19, 20
C   pitch, CaG-52
Q Volunteer to recite, hesitates, Mo-28
C Vomiting, CE-21, Ey-21

Q Waited on, dislikes being, CaE-38, CSA-21, SaB-38
I Waiter (compared), CaE-56, CSA-25c, SaB-56, Factor Ip
J War (Thurstone), Ch-4, Fe-1-2, Factor Se
J   vs. gradual, CaE-71, SaB-71, Factor Se
Q Watched on street, La-7, Mo-19
Q   working, bothered, La-5, Mo-16
Q   working, likes, GuA-32
T Watson-Glazer test of Critical Thinking, CaD-42
T Weigl figures, CT-1
T Werner tone rhythm series, CT-6
T Whipple Imagination Cards, Kr-1-2
I Wife, (comparison), CaE-59, SaB-59
X   get clothes for, CaF-34
R Wilful, etc., CaA-7, Factor Do
T Will, determined, CaD-15
R   in school work, BrB-1
X   power, want, CaF-33
T   vs. suggestibility, CaD-14, CaG-15, CSA-42c, CSA-45c
R Wise, etc., CaA-3
R Witty, etc., CaA-15
Q Woodworth's Inventory, BrA-27-28
I Word, association (Terman-Miles), FT1-1, FT2-1
T   building, Kr-4, Factor Wi
T   Fluency, 2 tests, DT-6
T   Fluency, (PMA), Ab1-4, Ab2-4
T   Number, DT-1c
R Work, diligent attitude toward, BrB-5, Factor De
Q   by fits and starts, La-47
Q   goes ahead with, St1-39, St2-6
Q   likes changing type of, GuA-11, GuC-3, RTD-3, Factor Pe
Q   on own hook, GuA-22
Q   much in short time, GuC-20, RTD-20, Factor Su
Q   things out in own way, La-14, Factor Ss
Q   restless to start life, ML-10
Q   with changing tasks, GuC-13, RTD-13, Factor Pe
Q   with others, BT-21, GuA-14, La-50 RTB-9, Factor Gs
Q Worried and tense, CaE-7, SaB-7, Factor Au
Q   over humiliation, Mo-3
Q   over misfortunes, GuA-15, GuB-10, Mo-10, RTB-4, RTC-10, Factor Cd

VARIABLES

R Worrying vs. placid, CaB-26, CaC-26,
  SaB-106, CSA-8c, CSA-15c, Factor E
Q Writing vs. speech, GuA-1

I YMCA Physical Director (Strong), Sg-17
I YMCA Secretary, (compared); CaE-47,
    CSA-19c, SaB-47, Factor Is
I (Strong), CD-12, CP-19, FH-13, Sg-19,
    ThA-12, Factor Iw
Q Yourself, like to be by, La-21, Factor Gs
Q think about, GuA-31

INDEX II

NAMES

This index contains the names of authors and junior authors responsible for analyses that are either fully covered in this survey or included in the Supplementary Analysis List. Names mentioned in the survey only as inventory or test authors are listed in Index I only. For each name, reference is made by code designation to the analysis or other place where the name appears.

Abrams, E. N. Ab
Andrews, T. G. Supp. Analysis
Axelrod, S. HJ
Baehr, M. E. BaA, BaB
Ball, R. S. Ri
Barnes, C. A. BC
Bell, E. G. WB
Bennett, E. Be
Bergmann, C. SB
Bolanovich, D. J. Bo
Bretnall, E. P. CP
Brogden, H. E. BrA, BrB, BT
Carlson, H. B. Ch
Carroll, J. B. Factor Cu
Carter, H. D. CP
Cattell, R. B. CaA-CaG, CE, CM, CSA, CT, SaB, Supp. Analysis
Coffman, W. E. Supp. Analysis
Cook, E. B. CW
Cottle, W. C. Co
Crissy, W. J. E. CD
Daniel, W. J. CD
Darley, J. G. MD
Darling, R. P. Supp. Analysis
Deemer, W. L., Jr. See Rafferty
Denton, J. C. DT
Dudek, F. J. See Kleemeier
Duffy, E. Du, Supp. Analysis
Ewart, E. Supp. Analysis
Eysenck, H. J. CE, Ey, Supp. Analysis, See Rees
Ferguson, G. A. Supp. Analyses, his own and with Scheier
Ferguson, L. W. Fe, FH, Supp. Analysis
Fiske, D. W. Supp. Analysis
Flanagan, J. C. Fn
Ford, C. F. FT
Freeman, G. L. FK
French, J. W. Supp. Analysis
Gannon, J. F. Supp. Analysis
Gibb, C. A. Gi, Supp. Analysis
Gordon, L. V. Supp. Analysis
Gordon, O. J. Supp. Analysis
Gruen, W. Supp. Analysis, see Cattell
Guertin, W. H. Supp. Analyses
Guilford, J. P. GuA-GuC; Factors factored: BaA, ThB; Martin Inventory factors factored: BaB, Lo
Guilford, R. B. GuA-GuC
Hampton, N. D. Supp. Analysis
Harsh, C. M. Supp. Analysis
Hart, H. H. HJ
Hellfritzsch, A. G. Supp. Analysis
Holzberg, J. D. WH
Howie, D. Ho
Hsü, E. H. Supp. Analysis, see Moore
Hughes, R. M. Supp. Analysis
Humphreys, L. G. FH
Jenkins, R. L. HJ
Katzoff, E. T. FK
Kleemeier, R. W. Supp. Analysis
Koch, H. L. Ko, Supp. Analysis
Kremer, A. H. Kr
Kuder, G. F. See Index I
Larsen, A. H. ML
Layman, E. M. La
Lehner, G. F. J. WL
Lesser, G. S. WB
Little, K. B. WL
Lorr, M. LW
Lovell, C. Lo, Data used, ThB
Lurie, W. A Lu
MacCrone, I. D. Supp. Analysis
Martin, G. C. Supp. Analysis
Marzoff, S. S. ML
McCloy, C. H. Supp. Analysis
McDonough, Sister M. BrB
McNamara, W. J. MD
Miller, A. CM
Moore, T. V. Supp. Analysis
Mosier, C. I. Mo
North, R. D., Jr. No
Oliver, J. A. Supp. Analysis
Pyles, M. K. CP
Raath, M. J. See Reyburn, Supp. Analysis
Rafferty, J. A. Supp. Analysis
Rees, W. L. Supp. Analysis
Rethlingshafer, D. Factor Pe
Reyburn, H. A. RTA-RTD, Supp. Analysis
Richards, T. W. Ri
Roberts, K. E. Ri
Roff, M. Supp. Analysis
Ryans, D. G. Supp. Analysis
Saunders, D. R. CSA, SaB, Factor Mp
Schanberger, W. LW

INDEX II

NAMES

Scheier, I. H. Supp. Analysis
Schmid, J., Jr. Supp. Analysis
Seashore, S. E. See Ewart
Sperling, P. I. HJ
Starfield, A. See MacCrone
Stewart, N. SB
Stice, G., SaB
Stott, L. H. Stl, St2
Strong, E. K. CD, Sg, Supp. Analysis List, Index I
Strong, F. W. FH
Taylor, C. W. Dt
Taylor, J. G. RTA-RTD
Thornton, G. R. Factor Pe
Tiffin, J. See Ewart
Torr, D. V. To
Thomas, W. F. BT
Thurstone, L. L. ThA, ThB, Supp. Analysis; Factors factored: BaA; Index I
Tiner, L. G. CT
Tschechtelin, S. M. A. Ts
Tyler, F. T. Ty
Tyler, L. E. FT
Vernon, P. E. Supp. Analysis
Wandt, E. See Ryans
Webb, E. RTA, Factor Wi
Wenger, M. A. Supp. Analysis
Wenig, P. W. See Cattell
Wheeler, W. M. WL
Wherry, R. J. CW
Whisler, L. D. Supp. Analysis
Winne, J. F. Supp. Analysis
Wittenborn, J. R. WB, WH, Wi, WM, Supp. Analysis
Wittman, P. LW

INDEX III

FACTORS

This index contains the names of all factors mentioned in the survey. For the names used by the authors of the analyses the code letters are given for the analyses where the factor may be found. For the names of factors used by the writer the word Factor and the factor code letters are given. These factors may be looked up directly in Part II.

Achievement, BrA
Action, interest in, RTC
Active, ThB
Activity, BaA, BaB
Adaptability, LW
  Social, Lo
Adequacy, general personal, Ho
Adjusted surgency, rhathymic, CaA
Adjustment, familial, Supp. Factor List
  or maladjustment, Ab, Co, CW, Ty
  social, Ty
Adventurous, cyclothymia, CaC, CSA
  surgency, charitable, CaA
Aestheticism from social pressure, Lu
Aesthetics, interest in, To, Factor Ie
Affection, need for, BT
Agitated depression, Wi
Agreeableness, Factor A
Aggression, externalized, BC
Aggressiveness, CaE, GuA, HJ, Ko, Lu
  social, La, SB, Ty
Agriculture, interest in nature and, Supp. Factor List
Alertness, GuB, RTC, Factor Al
Alternations, rate of, CaD
Altruistic, social and, Lu
Amiability, BaB
Annoyance at, superiority, CaE
  violation of manners and morals, CaE
Anti-femininism, puritanical and obstinate, BC
Anxiety, WB, WH, Wi, WM, Factor Ax
Anxiety-depression, CaE
Appeal, CM
  dependence Erg, CaF
Apprehensiveness, Ko
Arousal, physiological, FK
Ascendance, GuA, ThB
  flexible, BC
Assault, temper-, HJ
Assertive quality, sthenic, Ho
Aspiration, CaG
Athletics, interest in, Factor Ia
Attention, Gi
Authority, respect for, MD
Autism, CaE
Autistic tendency, Ko, Mo, Factor Au
Bohemian intellectualism, CaB, CaC, CSA
Boorishness, CaA, CaB, CaC, CaD
Business, interest in, ThA, To, Factor Ib
Carefree, GuA
Careful, CaE, GuA
Cattell's
  A, CaA, CaB, CaC, SaB
  B, CaA, CaB, CaC, CE
  C, CaA, CaC, CE, SaB, CaG
  D, CaA, CaC, SaB
  E, CaA, CaB, CaC, SaB
  F, CaA, CaB, CaC, CE, SaB
  G, CaA, CaB, CaC, CE, SaB
  H, CaA, CaB, CaC, SaB, CaG
  I, CaA, CaB, CE, SaB
  J, CaA, CaB, SaB
  K, CaA, CaB, CaC, SaB, CaG
  L, CaA, SaB
  M, CaB, CaC, SaB
  N, CaB, CaC, SaB
  O, SaB
Certified public accountant, interest in, Sg
Changeability of interest, La
Charitable adventurous, cyclothymia, CaB
  surgency, CaA
Charity, RTA
Clerical interest, Factor Ic
Classroom behavior, BrB
Closure, flexibility of, CaD
Closure, speed of, CaD
Cognition, Mo, SB
Community, will to, Kr
Compensation, egoism-, HJ
Computational interest, see Factor Ib
Concentration, Gi
Conflict, Ty
Conformity, Ko, Ri
Conscientiousness, Ko
  job, Bo
Conservative vs. radical, Supp. Factor List
Considerate, CaE
Conventionality, Factor Cv
Conversion-type symptoms, Wi, WM
Culture, Factor Cu
Cultured mind trained, CaA, CaB, CaC, CaD

FACTORS

Curiosity, CaF, CM
Cycloid, Mo, No, Factor Cd
Cyclothymia, CaA, CaB, CaC, CaD, CaG
Cyclothymia, adventurous, CSA
Cyclothymia, trustful, CSA

Decision in personal matters, St1, St2
Dependability, Factor De
Dependent, CaG
Dependent character, immature, CaA, CSA
Depression, DT, GuB, Mo, No, See Factor Lo
   agitated, Wi
Depressive, WB, WH, WM
Detail, attendance to, Bo
Deterioration, WB, Factor Dt
Deteriorated schizophrenic, Wi
Determination, CaG
Disposition Rigidity, CT
Dominance, CaA, CaB, CaC, CaD, CSA, Fn,
   Factor Do
Dominance, masculine, BC
Drive, general, GuC
Drive-restraint, Lo

Economic, FH
Efficiency in use of time, St1, St2
Egoism-compensation, HJ
Emotional, control, FK
   immaturity, GuA, Factor Ei
   reactivity, Ab
Emotionality, CaA, CaB, CaC, CE, CSA, FT1,
   FT2, Lo, Factor E
   cycloid, No
   hypomanic sthenic, CaA
   infantile sthenic, CaC
   introversion, La
   moodiness, La
   self-rated, FK
   sensitive imaginative, CaA, CaB, CE, CSA
   sensitivity, La
Emotionally, mature character, CaA, CSA
   stable, BaA, BaB, CaC, CE, Gi, RTB, ThB
Erg, CaF, CM
Escape or fear, CaF, CM
Excitability, Ho
Excitement, WB, WH, Wi, Factor Ex
   schizophrenic, WM
Exhibitionism, monetary, BC
Externalization tendency, Ab

Familial adjustment, MD, Supp. Factor List
Family, interest in, Factor If
Favorable attitude, inducing, Ho
Fear, Erg, CaF
Fearfulness, Factor Fe
Femininity, CaD, CaG, CW, Ko, Ty,
   see Factor Mf
   and sophistication, CSA
Flexibility, RTC, RTD, Supp. Factor
   List
Flexible ascendance, BC
Fluctuation, CaD
Fluency, verbal; pictorial, Gi
   of association, CT
Friendly, ThB
Frustration tolerance, CaC
   phlegmatic, CaA
Fulminating behavior, Wi

General, mental ability, DT
Gregariousness, BrB, BT, CaE, CaF, CM,
   La, Factor Gs
Guilford's
   A, GuB
   D, GuB
   E, GuA
   LT, GuB
   M, GuA
   N, GuC
   R, GuA, GuB
   S, GuA, GuB
   T, GuA, GuB
   GD, GuC

Halo, buddy-rating, self-rating on
   cognition, and self-rating on
   personality, Supp. Factor List
Hard-headed rationalism, CSA
Hebephrenic schizophrenic, Wi
Honesty, BrA, Factor Ho
Hypersensitivity, Ko, Mo
Hypochondriasis, Co, Ey
Hypomania, BaB
Hypomanic, sthenic, emotionality, CaA
Hysterical, CaE, Ey, WH, Factor Hy

Ideational Inertia, CT
Imaginative emotionality, sensitive,
   CaA, CaB, CE, CSA
Immature, dependent character, CaA,
   CaB, CaC, CE, CSA
   impatience, CSA
Immaturity, Ko
Impatience, immature, CSA
Impressionableness, quickness and,
   CSA
Impulsiveness, GuA, GuB, La, No, ThB,
   Factor Mp
Independence, La, St1, St2
   intellectual, BT
   relaxed, CaE

FACTORS

Independent self-sufficiency, BC
Inferiority feelings, Kr, La, Mo,
Inhibition, Ey, Ko, RTD
Inhibited, insecure desurgency, CaA
Insecure, CaG
   inhibited desurgency, CaA
Insight, Ty
Integration, lack of, Ey, ML
   positive character, CaA, CaB, CaC, CE, CSA
Intellectual, independence, BT
   leadership, BT, CaE, CSA, GuA
Intellectualism, bohemian, CaB, CSA
Intelligence, BrA, BrB, CaB, CaC, CaG, CE, Ch, CW, Kr, Mo, Factor G, see also Mental
Introversion, Ey, Fn, GuA, La, see Factor T
   social, Mo

Job, ability to do, Bo
   conscientiousness, Bo

Language, interest in, CD, FH, Sg, ThA
Leadership, esteem of, Co
   intellectual, BT, CaE, CSA, GuA
   social, ThB
Liberty, personal, CaE
Light-heartedness, RTA, RTB
Likeableness, Ri
Liking thinking, CaE, GuA, GuB, RTC
Linguistic activities, interest in, Factor Il
Loneliness, Factor Lo

Maladjustment, see Adjustment
Male association, interest in, CD
Mania, WB, WH
Manic-depressive, Wi
   (manic), Factor Ma
Marital boredom, Supp. Factor List
Masculine dominance, BC
Masculinity vs. femininity, CaE, GuA, ThB, Factor Mf
   of interests, FT1, FT2
Mating, CaF, CM
Mature character, emotionally, CaA, CSA
Maturity, Supp. Factor List
Mechanical coordination, CW
Mechanics, interest in, To, Supp. Factor List
Melancholy, agitated, CE
   shy, desurgency, CaA
Memory, DT
Mental, capacity, general, CaA, DT
   iniative, CaD
Meticulousness, BC, Bo, Factor Me
Mind, trained, cultured, CaA
Monetary exhibitionism, BC
Moodiness, La
Moral code, acceptance of, BrA

Narcistic play, regressive, erg, CaF
Nature and agriculture, interest in, Supp. Factor List
Nature, interest in, To
   interest in understanding, CaE
Nervousness, GuC, RTD, Factor Ne
   surgent, CaE
Neurasthenia, CaA, CaB, Ey
Neurotic emotionality, sensitive, imaginative, CaA
Neuroticism, Be, CaD, CaE, CaG, Co, Ey, Fn, MD, WL1, WL2
Number or speed, DT

Obsessional character, vigorous, CaA
Obstinate anti-femininism, BC
Open-mindedness, Lu
Optimistic self-confidence, BC
Organizing, Bo
Over-activity, CW
Overstimulated, CaG

Paranoia, CW, WH, Wi, Factor Pa
Paranoid schizothymia, CaA, CaB, CSA, WB, WH, Wi, WM, Factor Ps
Parental, protectiveness, CaF, CM
People, interest in, CD, Co, Du, FH, Sg, ThA, To, Factor Ip
   working with, Sg
Perseverance, see Persistence
Perseveration, CT, RTB
Persistence, BrA, CaG, Kr, RTA, RTB, RTC, RTD, Factor Pe
Personal, adequacy, general, Ho
   effectiveness, SB
Philistine, Du, Lu
Philosophizing, interest in, Factor Ip
Phlegmatic frustration-tolerance, CaA
Phobic--compulsive reaction, WH, Supp. Factor List
Pictorial fluency, Gi
Poise, rigid, tough, CaA, CaB, CaE, CSA
Political, FH
Practicality, Lu
Primary function, BaA, BaB
Problems, liking, BT
Psychomotor efficiency, CaD, CaG
Psychotic, WL1, WL2
   tendency, Factor Pc

FACTORS

Public-speaking, Mo
Puzzles, interest in, Factor Iz

Quickness and impressionableness, CSA

Radicalism, CaE, Ch, Fe, Supp. Factor List
Rationalism, CaE
  hard-headed, CSA
Reaction time, CaD
Realism, Lo
Reality, inability to meet demands of, La
Reflective, ThB
Reliability, Kr
  interest in, Factor Ir
Religious, Ch, FH, Lu
  attitude, Factor Re
Resourcefulness, social, St1
Responsibility, personal, St2
Rhathymia, CaE, GuA, GuB, Factor Rh
Rhathymic, adjusted surgency, CaA
Rigid, tough, poise, CaA
Rigidity, CaG, LW, see also Flexibility
  disposition, CT
Routine activities, interest, Co

Sales ability, Bo
Schizoid, CaB, CaC, CaE
  desurgency, CaA
  paranoid, CaA, CSA
  withdrawal, LW
Schizophrenic, excitement, WM
  reality distortion, LW, Supp. Factor List
Schizothymia, see Schizoid
Scientific interest, CD, Co, FH, Sg, ThA, To, Factor Is
Self assertion, CaF, CM
Self-confidence, La, ML, ThB, Ty, Factor Sc
  optimistic, BC
Self-consciousness, Gi, Factor Sn
Self-control, BrA, CaG
Self-regard, deluded, SB
Self sentiment, CaF, CM
Self-sufficiency, Fn, GuA, Ri, Factor Ss
  emotional, sensitive, CaE
  independent, BC
  independent adventurous, CaE
Selling, interest in, see Factor Is (neg.)
Sensitive imaginative emotionality, CaA, CaB, CE, CSA
Sensitiveness, FT1, FT2, La, Factor Se
  social, RTA
Sensitivity to social disapproval, BrB
Serious-mindedness, RTA, RTB
Sex, interest in, Factor Ix
Shy, melancholy, desurgency, CaA
Shyness, CaE, GuA, GuB, No, RTC, see Factor So
Simplicity, rough, CaC
Sociability, GuA, La, RTB, RTC, Factor So
Social adaptability, Lo, Ty
  and altruistic, Lu
  aggressiveness, La, SB, Ty
  butterfly, BaB
  disapproval, sensitivity to, BrB
  extroversion, Ko
  inadequacy, feelings of, La
  inhibition, BT
  initiative, La
  intelligence, Bo
  interests, MD
  introversion, GuA, Mo
  leadership, ThB, Supp. Factor List
  misfit, Ey
  sensitiveness, RTA
  resourcefulness, St1
  role of girls, FT2
  welfare activities, preference for, Co
  welfare, interest in, Factor Iw
Solitariness, Gi
Sophistication, Factor Sf
  femininity and, CSA
  genteel, CaC
Spatial Intelligence, CT
Spearman's "g" in personality, CaA, CaD, see Factor G
Spiessburger concernedness, CaB, CaC
Stability, character, CSA
  emotional, RTB
Stable character, emotionally mature, CaA, CaC, CaD, CaE, Kr
Stable emotionally, BaA, BaB
Stealing, group, HJ
Sthenic, assertive quality, Ho
Street-gang activity, HJ
Submissiveness, CaA, CaB, CaC, GuA, Fn, see Factor Do
Suggestibility, see Factor Wi
Super-ego, CM
Surgency, CaA, CaB, CaC, CaD, CaG, CE, DT, Ey, RTA, RTB, RTC, RTD, Factor Su
  adventurous cyclothymia and, CSA
  charitable adventurous, CaA
  rhathymic, adjusted, CaA
Sympathy, need for, BT
Systematic, Bo

F A C T O R S

Temper-assault, HJ
Tempo, CaD
Tension, Ko, RTC, RTD
Theoretical, Du, Lu
Things vs. people, interest in, Sg
Thinking, GuB
   introversion, GuA
   liking, CaE, GuA, GuB, RTC
Thought, absorbed in, Ko
Tough, poise, rigid, CaA
Toughness, FT1, FT2
Trained socialized cultured mind, CaA, CaB, CaC, CaD
Trustful cyclothymia, CSA

Variety-loving, GuC
Verbal fluency, Gi
Verbalization, Co
Vigorous "obsessional" character, CaA

'W' factor of Webb, BrA
Will, Kr
   active reliable, CaD
   control, CaE, CSA, Factor Wi
Withdrawn heboid schizothymia, CaB, CaC, LW